

44. M53:94-17

# ENDANGERED SPECIES OVERSIGHT

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## 94-1

### HEARINGS

BEFORE THE

SUBCOMMITTEE ON FISHERIES AND WILDLIFE  
CONSERVATION AND THE ENVIRONMENT

OF THE

COMMITTEE ON

MERCHANT MARINE AND FISHERIES

HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

FIRST SESSION

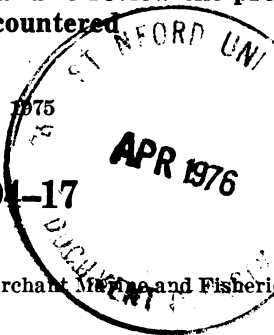
ON

Implementation and Administration of the Endangered  
Species Act and its amendments, and to review the prob-  
lems and issues encountered

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OCTOBER 1, 2, 6, 1975  
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# ENDANGERED SPECIES OVERSIGHT

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WEDNESDAY, OCTOBER 1, 1975

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON FISHERIES AND WILDLIFE  
CONSERVATION AND THE ENVIRONMENT OF THE  
COMMITTEE ON MERCHANT MARINE AND FISHERIES  
*Washington, D.C.*

The subcommittee convened, pursuant to notice, at 9:14 a.m., in room 1334, Longworth House Office Building, Hon. Robert L. Leggett (chairman of the subcommittee), presiding.

Mr. LEGGETT. The subcommittee will come to order.

The Subcommittee on Fisheries and Wildlife Conservation and the Environment begins today the first of its major oversight hearings on the Endangered Species Act since the amendments of December 1973, and since the recent Convention on International Trade in Endangered Species of Wild Fauna and Flora took effect on July 1 of this year.

Although this subcommittee held 1 short day of hearings in November 1974, in order to examine certain specific areas of interest concerning both the Endangered Species Act and the Marine Mammal Protection Act, it is the chairman's hope that in the next several days we will have the opportunity to explore, in a more comprehensive fashion, the implementation and administration of the entire act.

Some 21 months have now expired since the 1973 amendments and some 10 months since our previous hearing on this subject. We have invited the Departments of the Interior and Commerce to begin this morning by briefing the members on the progress which has been made in this time period and reviewing the problems and issues which have been encountered.

At the conclusion of the Government's testimony, we will hear today and tomorrow from some of the folks who apparently have some problems, recommendations, and issues they would like to have discussed before the committee.

Finally, on Monday the 6th, the subcommittee will be inviting back certain departmental representatives and, perhaps, others to engage in some useful dialog to see whether we cannot solve whatever problems are identified.

I believe that these hearings should serve to highlight the significance of this comprehensive act and to make us all aware of the important goals it embodies. If there are individuals here today who do not have an opportunity to testify, I would encourage your submission of written testimony for the hearing record, or request counsel for time to testify, and we will be very glad to take your testimony, morning, lunch, evening, or night.

So our first witness this morning is our distinguished Director of the Fish and Wildlife Service with the Department of the Interior, Lynn A. Greenwalt, and Keith Schreiner, Associate Director, Federal Assistance, and Clark Bavin, Chief, Division of Law Enforcement.

Gentlemen, nice to have you here, and your statement has been submitted to the committee, and it will be incorporated in our record as though completely delivered, some 16 pages, and you can feel free to highlight whatever portions of it you care to.

**STATEMENT OF HON. LYNN A. GREENWALT, DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY KEITH SCHREINER, ASSOCIATE DIRECTOR, FEDERAL ASSISTANCE, AND CLARK BAVIN, CHIEF, DIVISION OF LAW ENFORCEMENT**

Mr. GREENWALT. Thank you, Mr. Chairman.

I am Lynn Greenwalt, Director of the Fish and Wildlife Service. With me are Keith Schreiner, Associate Director, Federal Assistance, and Clark Bavin, Chief, Division of Law Enforcement.

In addition, you specifically requested Deputy Assistant Secretary Bohlen, Region 1 Director Martinson, Ronald Skoog and Early Baysinger of the Office of Endangered Species; and Richard Parsons of the Division of Law Enforcement to be available at the hearings this morning.

With the exception of Dr. Skoog and Mr. Martinson, all individuals you requested are here in the room, although not at this table.

Mr. Martinson asked me to convey his regrets that prior commitments prevent his appearance today. Dr. Skoog is out of the country on official business.

Mr. Chairman, we appreciate this opportunity to discuss with you and members of the Subcommittee the Fish and Wildlife Service's progress in implementing the Endangered Species Act.

We think that we have made substantial progress in implementing this complex law. With your permission, we have prepared presentation for you consisting of an overview on the background and authorities of the new act, a brief review of accomplishments to date and where we are doing, and a description of problems we have entered in the administration of this important program and possible solutions.

I will undertake this portion of the presentation, and then each of the gentlemen at the table with me will discuss major operational actions and activities that have and are being carried out, specifically enforcement—Mr. Bavin will describe the status of the enforcement program, and Mr. Schreiner will follow with an overview of species status review, Federal-State cooperation, interagency cooperation, and resource management.

We do, of course, Mr. Chairman, welcome your questions and comments at any time during this presentation.

As you are aware, Mr. Chairman, on December 28, 1973, the Endangered Species Act of 1973 was signed into law. On that date the Departments of the Interior and Commerce assumed major new re-

sponsibilities for assuring the perpetuation of a healthy diversity of animal and plant communities. On that date an estimated 200,000 endangered and threatened animal and plant species throughout the world, both listed and unlisted, became a major Federal responsibility.

In complexity and increased responsibilities the new act far surpassed the 1969 act. We have made mistakes and faulty decisions along the way, but I believe we are now in command of the situation. Significant progress has been made in implementing the act.

Furthermore, most of the systems, regulations, and processes that will permit greater speed, efficiencies, and effectiveness have been established.

To better understand what December 28, 1973, means, in terms of a Federal commitment, let me briefly compare some of the major authorities and responsibilities of the 1969 act and the present law.

The Endangered Species Conservation Act of 1969 was hailed by many conservationists and environmentalists as a landmark in the preservation and perpetuation of our living natural resources. It has been said that the 1969 act established the United States as the world leader in this endeavor. What did the 1969 act do to deserve such acclaim?

Basically, it authorized the Federal listing as endangered any animal determined to be threatened with worldwide extinction, the protection of such species to be afforded through a prohibition on importation; an authorization for habitat acquisition in the United States, and the promotion of sound management practices in this and other countries.

In contrast, the 1973 act authorizes the Federal listing of plants in addition to animals and applies to animals not previously considered—arthropods and other invertebrates. The 1973 act provides considerable flexibility in considering the status of a species and in affording to it commensurate protection.

To be listed a species does not have to be “threatened with worldwide extinction.” A species, subspecies, or lesser taxa need to be in jeopardy in only a portion of its range to qualify for Federal protective action.

In effect, it is no longer necessary to wait until the species reaches that most critical level in its existence—threatened with extinction—before some action is taken. A determination that a species is “likely to become endangered within the foreseeable future” is now sufficient to invoke the law and all its management and protective devices. We now have a much needed management tool—that is, authority to act before a point of no return is reached.

With a listing as endangered comes a host of prohibitions. Except under specified circumstances—exemptions for scientific purposes, economic hardship, Alaska Native subsistence and handicraft—it is illegal under the new act—punishable by substantial criminal and civil penalties—to—import or export—take—kill, harass—possess, sell, deliver, carry, transport, or ship if illegally taken—engage in interstate or foreign commerce for a commercial purpose—transport, deliver, receive—any animal listed as endangered.

The prohibitions are slightly less stringent for plants. Keeping in mind that the 1969 act prohibited only importation of a listed species,

the impact of the 1973 act in just this one area becomes quite apparent.

The new act did not void the existing list of endangered species, but merely applied the new prohibitions and other authorities—with the exception of economic hardship exemptions—to the existing listed animals until such time as they are listed or delisted.

With regard to a species listed in the threatened category, the 1973 act permits the issuance of protective regulations commensurate with the needs of the species and the degree of threat to its existence.

In other words, all, some, or just one of the prohibitions placed by statute on a species listed as endangered can by regulation be placed on a species listed as threatened.

In just these two aspects—listing and prohibitions—the 1973 act far surpassed its predecessor, and profoundly affected all levels of government, both Federal and State, as well as private enterprise.

I do not believe any provisions of the new act have had as profound an impact as these two on what it is we do for the resource, what others can or cannot do, and how it is all viewed by those who are concerned.

While both acts provided for habitat preservation through acquisition, here again the 1973 act surpassed its predecessor by removing a statutory limitation on the use of Land and Water Conservation Fund Act money and by providing a means to identify and protect critical habitats.

The new act provides increased authority and alternative sources of funding a greater international involvement. At the international level the act is the implementing legislation for the Convention on International Trade in Endangered Species and Wild Fauna and Flora. As signatory to that convention the United States has a major international commitment to the protection of our living natural resources which heretofore applied only to certain migratory birds and marine mammals.

One of the most significant aspects of the 1973 act is its recognition of the important role of State conservation agencies. Unlike the 1969 act the new law provides a strong Federal commitment for close cooperation and coordination with State fish and wildlife agencies. That commitment is implemented through cooperative agreements and a grant-in-aid program with the States, in addition to the cooperative development and execution of recovery plans.

Section 6 of the act authorizes the Secretary to enter into cooperative agreements with the States to further the purposes of the act. Nearly all the endangered or threatened animals of the United States are resident and, therefore, should be under State management and control.

Though the Federal Government may preempt State control of the regulated taking of such species in the absence of an adequate State program, it is not our intent to preempt State control, but rather to help States through cooperative agreements to develop adequate management programs.

The grant-in-aid program authorized by section 6 of the act provides for a financial incentive to the States to help meet the act's requirements. The act authorizes an appropriation of up to \$10 million for grant-in-aid over a 4-year (1974-77) period.

We intend to do everything possible to encourage States to enter into cooperative agreements. Their expertise, manpower and cooperation are essential if we are to attain our overall goal of effecting the recovery of the species and removing them from the list.

The ability of the Fish and Wildlife Service to carry out the purposes of the Endangered Species Act depends on the willingness and ability of the States to participate in the program. With few exceptions, States are cooperating and have been expending scarce financial and manpower resources in obtaining the necessary authority and in developing plans for species recovery. To date 21 States have demonstrated their interest in achieving a cooperative agreement and are in various stages of meeting the requirements set out by the act.

In addition, the new act directs all Federal agencies to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of endangered or threatened species or destroy critical habitat.

This is a very important element of the act, Mr. Chairman.

Meetings have been held, and regulations are being drafted to clarify Federal agency responsibilities under this important provision of the act.

It is, of course, a good thing to have this new authority, but what have we done with it? What do we have to show for 21 months and some \$10 million?

I wish we could point to specific species and certify that those species are once again viable components of their ecosystem. Obviously, I cannot do that. The processes of restoring a particular species may take years, and may indeed be impossible to achieve.

No amount of dollars, manpower or authority can guarantee success if success is to be measured in terms of species "saved," which, of course, cannot be equated with listing. At the present time there truly is no way to judge the success of the endangered species program.

A systematic approach to such evaluation must be developed and is a long range objective for the program.

When the act became law, there were certain things that had to be done and done quickly. However, we have been dealing with a law that is extremely complex, far reaching and forceful and as such it clearly had to be implemented and used carefully and judiciously. It has been of primary importance over the past 21 months to prepare an orderly and carefully structured base of procedures and supporting regulations upon which to build an active, effective and timely program of listing and delisting, permit processing, cooperation with State conservation agencies, habitat acquisition, protection and enhancement of species on Service and other federally administered lands and assistance in other countries.

A large number of individuals around the country had to be familiarized with the new prohibitions, authorities, and procedures developed. Supplemental funding and additional staffing were essential, but difficult to obtain.

As with any complex system, education is a slow process. Many mistakes were made and misinterpretations by the uninformed was rampant. Pet owners, zoos, circuses, importers, exporters, breeders,

dealers, researchers, and international travelers descended on us in droves with unfounded as well as legitimate concerns or problems.

At best the initial 6 months represented a period of little more than reaction to crises while trying to train new staff, fully interpret and understand the act, and establish priorities within immediate needs.

Faced with this situation I am firmly convinced that in slightly less than 2 years significant progress has been made.

We have consummated memorandums of understanding with the Department of Commerce to delineate areas of jurisdiction, coordination, cooperation and law enforcement.

We have held workshops throughout the country and briefed States, Federal, and private conservation agencies on the act. Similarly, steps have been taken to insure that all Interior agencies and the other Federal agencies are aware of their obligations under the act.

We have developed guidelines for States to use in preparation of cooperative agreements and action is well underway in reaching such agreements. A model nongame and endangered species bill has been developed to assist States in developing and obtaining legislative authority compatible with the Federal law. On Dec. 28, 1973, few States had adequate authority as required by the act.

Since December 28, 1973, we have developed a method to implement the difficult but essential "critical habitat" concept of the act. We have established some 45 recovery teams—experts engaged in developing recovery and carrying out plans that are essential to effect the recovery of some 56 high priority endangered species. Educational materials on endangered species including brochures, notices, and TV spots to warn foreign travelers about illegal imports have been produced.

With the signature of the 10th nation to the Convention of International Trade in Endangered Species of Wild Fauna and Flora on April 2, 1975, steps to delineate the U.S. Scientific and Management Authorities were initiated.

Procedures, systems, and regulations have been developed to carry out all the functions of the act from listing, delisting, and reclassification of species to permit issuance and species priority setting. Species status reviews and listing actions on several hundred plants and animals are underway.

So much for the accomplishments. As you are well aware, Mr. Chairman, progress in implementing the act has not been without problems. Some of our problems have been legislative, requiring either clarification of existing provisions of the act, or specific amendments thereto. Some of our problems have been operational—manpower and funding—and some of our problems result from the nature of the human animal itself.

Many people view the 1973 act as an impediment to their business, agency goals, traditional rights, or their personal freedoms. To some we are not doing enough to protect or restore species, to others we are doing too much. I am distressed by this situation.

I must repeat, we are dealing with a law that is extremely complex, far reaching, and forceful. As such, it must be implemented and used carefully and judiciously. Those who have said that we are avoiding discharging our responsibilities have expected too much too quickly.

On the other hand, there are those who view our implementation of the act as a threat to their livelihood. In some cases it is; it should be. However, I sympathize with those who were engaged in legitimate commerce prior to enactment of the 1973 act, and who were, as of December 28, 1973, put out of business or in violation by continuing their enterprises.

certain animals that have been illegally overharvested, or through We fully support the concept in the act to reduce the demand for the loss of habitat or for other reasons had been reduced to a level where their continued existence is in jeopardy.

However, we recognize that this extreme measure has also caused severe economic hardship to many individuals who were engaged in legitimate commercial activities prior to passage of the 1973 act. The commercial demand for endangered animals from the wild should be eliminated, and the United States should take the lead by reducing the demand by its citizens for animals taken from the wild, but to abruptly eliminate this demand by declaring illegal an activity which does not affect wild stocks appears to be an unnecessarily severe approach.

The 1969 Endangered Species Act did not prohibit the sale and interstate transport for commercial purposes of animals listed as endangered, or the parts or products of such animals. Only importation was prohibited.

The 1973 act provides a 1-year economic hardship exemption for species listed subsequent to December 28, 1973. An exemption is also provided for animals held in a controlled environment on the date of enactment if such animals were not being held for commercial purposes.

For example, the breeder of Swinhoe's pheasant who trade with other aviculturists, the wholesaler and retailer with a stock of scrimshaw or other products of animals listed as endangered under the 1969 authority were not provided any exemptions under the new law. Yet, they were engaged in legitimate commerce prior to December 28, 1973. I believe these people have a valid criticism of the act. The act should be modified to insure equity to those individuals impacted.

The 1973 act appeared not to distinguish between "captive, self-sustaining populations" of endangered species and wild populations of the same species. Yet, some species are being bred in captivity at a rate sufficient to insure the continued supply of captive animals without replacement from wild stocks.

As we gained familiarity with the act and the universe impacted by its provisions, it appeared desirable to resolve the problem of captive, self-sustaining stocks of endangered animals by legislative action.

In hearings, last session, such an amendment was proposed. It would have established a category for listing captive, self-sustaining



populations of otherwise endangered species and authorized the Secretary to issue protective regulations. We have since determined that similar action can be accomplished administratively under the existing authority.

At that time we suggested a number of other amendments which have since been refined. I believe the report conveying our recommendations has been transmitted to the Congress in a letter to the Speaker, copies which are available this morning.

Briefly, the amendments would add a new type of economic hardship exemption by providing the Secretary with authority to waive certain of the prohibitions, namely those dealing with importation, exportation and interstate commerce, for live endangered species, as well as parts or products lawfully held within the United States on December 28, 1973, for commercial purposes.

This amendment, if enacted, would among other things resolve the problems addressed by H.R. 3465 and H.R. 2057, bills recently considered by the subcommittee, providing for disposal of whale oil, bone and teeth.

Other clarification and refinements to the act are proposed which have been identified as necessary to efficient execution of the program.

First, it is proposed to eliminate the 90-day comment period in the issuance of emergency listing regulations. Such emergency regulations cease to be in effect after a 120-day period unless the standard regulatory procedure is applied. If an emergency occurs, authority should be available to take immediate action. A mandatory 90-day waiting period could be too late to save the animal or animals.

A clarifying amendment is proposed to insure that notice of permit review applies to all permits authorized. In order to overcome a problem with the 30-day notice requirement in issuing permits in an emergency situation, it is proposed to eliminate such requirement for emergency situations only.

There have been occasions where the health or life of an animal on the endangered species list has been threatened because the Secretary lacks the authority to waive the strict 30-day public notice requirement.

Most typically, this has happened where an owner of animals in captivity goes into bankruptcy and there is no money to pay for food for the animals. We know of no instances where an animal has died under these or similar circumstances, but we feel the situation could easily be avoided by an emergency clause such as suggested in the proposed amendment.

Two other amendments are proposed to correct apparent oversights in the act. Authority for law enforcement personnel to arrest, without a warrant, persons committing violations in their presence or view was contained in the 1969 act and is found in other wildlife statutes. It was apparently inadvertently omitted from the final language of the 1973 act. Likewise, provision to dispose of forfeited property contained in the 1969 act was overlooked in drafting the new act.

With regard to funding activities under the act, other than the grant-in-aid and land acquisition, the administration's proposal to extend the appropriation authorization has recently been introduced as H.R. 8092. The authorization, contained in section 15 of the act, expires at the close of fiscal year 1976.

The administration's recommendation for the Department of the Interior's authorization is for maintaining the fiscal year 1976 level of \$10 million annually through fiscal year 1978. An authorization at this level will permit actions to be taken to protect only those species which are most important to the American people and which are in the most critical conditions. In other words, we must establish priorities for handling activities under the act.

We must look at the act as a whole and determine where priorities should be placed, where limited funds and manpower should be used to obtain the greatest benefit to the resources. The act is so comprehensive in its scope and import that it be virtually impossible, even with very high levels of funding and staffing, to accomplish all the work that is mandated by the act. Therefore, we have to make some selections about what it is we will do. With regard to endangered and threatened animals and plants, this means we will concentrate our resources on native species before foreign species, and on species that will benefit most by being listed first.

We will be concentrating on consummating cooperative agreements with the States. Only with their full participation can the job be done. States bring to the effort hundreds of biologists and enforcement personnel and millions of acres of potential habitat.

On the other hand, we will be forced to deemphasize certain provision such as the section 9(d) requirement to register all importers and exporters of fish and wildlife. An international program as envisioned in section 8 will also be limited. Animals will be given priority over plants, and full species will be more important than lesser groups.

Mr. Chairman, this is the framework within which we must operate. As for the specifics of what it is we are doing, Mr. Bavin will now describe our enforcement and permit activities, and Mr. Schreiner will follow with an overview of listing processes and other significant activities.

Mr. Chairman, I would be delighted, along with my colleagues, and others, to answer any questions you might have.

Mr. LEGGETT. Very good. Thank you very much, Mr. Greenwalt.

We are going to abate questions and cross examination at this point.

We have got your amendments and, hopefully, we could introduce those at a later date and get your formal report on the legislation and proceed from there.

Now, Mr. Schreiner, you have a statement, and Mr. Bavin, you have a statement. I notice that they are also long and I hope that we can incorporate both statements in the record at this time.

Mr. GREENWALT. Mr. Chairman, let me apologize for reading the statement. However, I feel that the degree of background and fundamental understanding that it presents to all of us is very important.

Mr. LEGGETT. I do, too, and it is helpful.

Mr. Schreiner, your statement is in the record. Do you want to deliver it all or can you give us portions of it?

Mr. SCHREINER. Mr. Chairman, I believe Mr. Bavin was going to give his statement next, with your permission.

Mr. LEGGETT. Very good.

Mr. BAVIN. I believe that incorporation in the record will provide sufficient data for the committee at this time and defer to Mr. Schreiner.

Mr. LEGGETT. All right.

Do you want to emphasize anything in particular in your statement?

Mr. SCHREINER. Mr. Chairman, I am going to discuss some controversial aspects of the act, and I would appreciate the opportunity to read selected portions of the statement and cover some of the main points, If I may.

One of the least understood and most controversial aspects of implementing the Endangered Species Act of 1973 is the process by which we list, delist or reclassify plant or animal species. The process is complex, lengthy, and exacting. The act of listing, delisting, or reclassifying is almost always favored by some people and disfavored by others.

As might be expected, those who do not favor our actions express their disfavor the most vigorously. This is natural and to be expected, but it results in a negative national press with resultant letters of protest to the President, the Secretary and the Congress. There are, in fact, few things that we do in the Fish and Wildlife Service that are so much in the public eye as our endangered species activities.

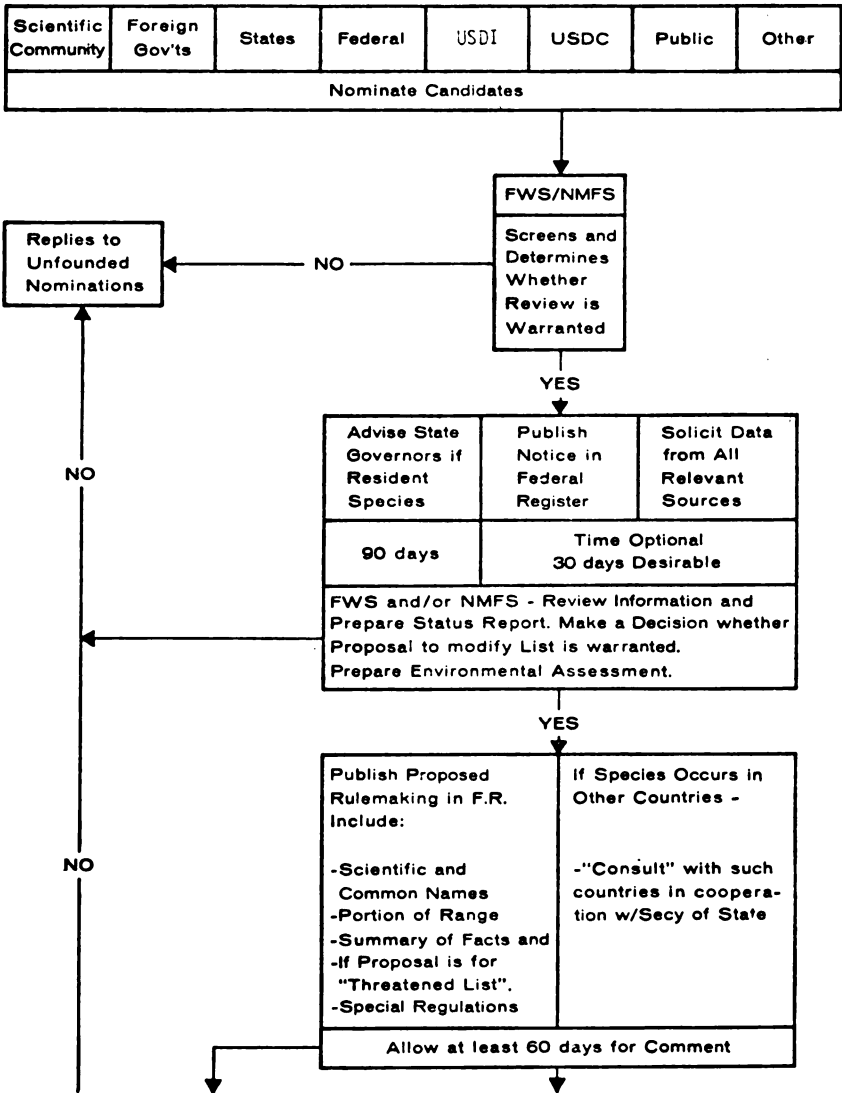
I believe you have before you a diagrammatic sketch of the species listing, delisting, or reclassification process. I will depart from my written text and briefly explain it to you, because it is little understood and because it is very important to an understanding of how long it takes to do the job.

Mr. Chairman, if I can hold it up.

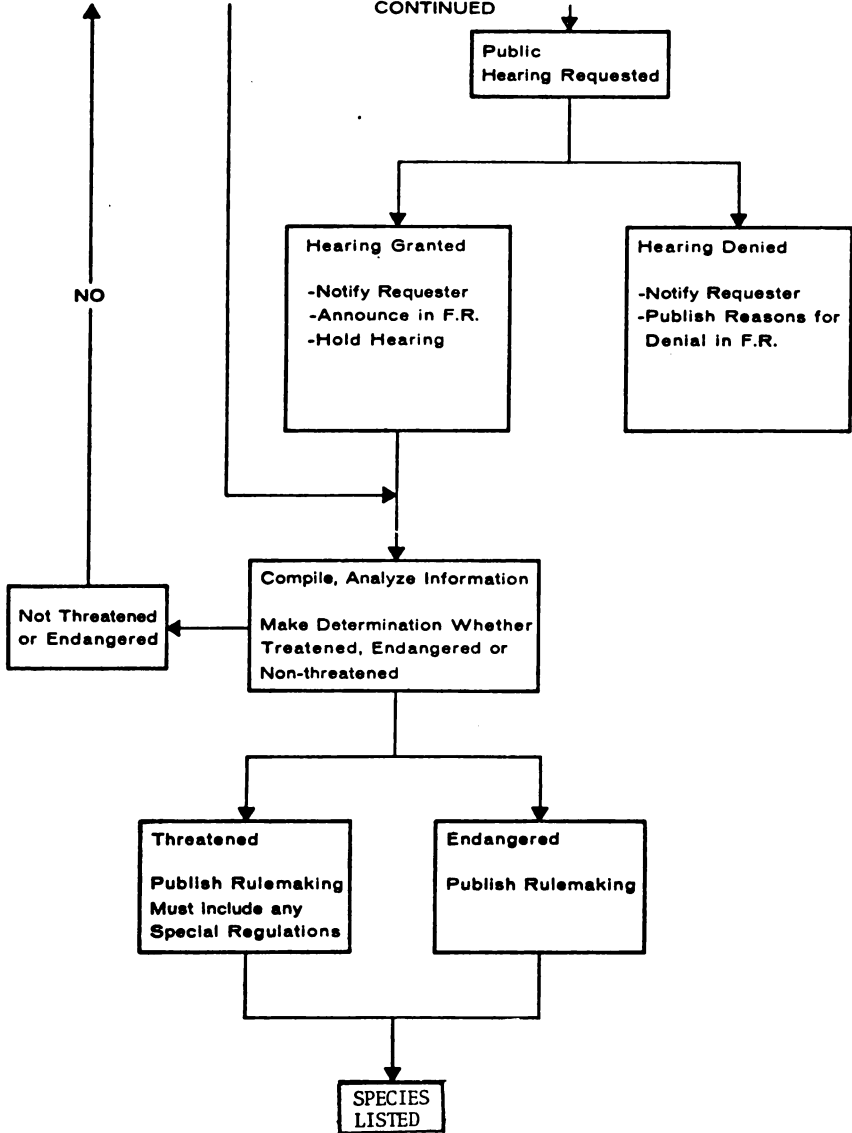
It is this diagrammatic sketch.

[The following was submitted:]

**GENERAL PROCEDURES FOR  
MODIFYING LISTS OF THREATENED OR ENDANGERED WILDLIFE**



GENERAL PROCEDURES FOR  
MODIFYING LISTS OF THREATENED OR ENDANGERED WILDLIFE  
CONTINUED



Mr. LEGGETT. We have a copy of it.

Mr. SCHREINER. All right, sir. The process of listing or delisting or reclassifying a species starts in one of two ways. Either we are petitioned or requested to take this action, or we initiate it on our own. The top block shows where the request or the petition may come from and how it starts.

In the case of a petition, the first thing we do is assemble a small group and review the petition in order to make a determination about whether or not it is substantial enough to further consider this particular species.

Mr. LEGGETT. How long does that take, examining the petition file?

Mr. SCHREINER. Examining the petition may take a few days, or a few weeks depending on our workload.

Mr. LEGGETT. How long does it take to open the letter that has the petition inside?

Mr. SCHREINER. Not very long!

If the initial decision is no, we simply respond to the petitioner and tell him we do not believe he has sufficient evidence to warrant a review and ask him to resubmit additional data if available. If the answer is yes, we do one of two things.

If the evidence is sufficient and we are sure that this animal should be considered for listing, we will immediately initial a proposed rule-making.

If the data is very scarce and sketchy, we go to the next block down the diagrammatic sketch which is entitled "Advise State Governors of Resident Species." This is actually a "Notice of Intent to Review the Status of the Species." We publish this notice in the Federal Register and give all interested persons 30 days to provide us with any information they may have, either pro or con.

At the same time, we notify State Governors in the case of a resident species, because the law requires us to consult with the States, and they must be given 90 days to respond.

Mr. LEGGETT. Do you also notify the petitioner at that time of what is going on?

Mr. SCHREINER. Yes, sir, we notify the petitioner.

We publish a Notice of Intent to Review the Status of the Species in the Federal Register and notify the petitioner that we have accepted his petition.

Mr. LEGGETT. What you are saying is within weeks after the petition is filed, the petitioner gets notice that it either has been rejected or that it is going through a process?

Mr. SCHREINER. Ordinarily yes, though there may be some exceptions. Usually the initial step is taken rather quickly.

Somewhere between 30 and 90 days later, depending on when the State has responded, we review all the information we have and make a decision, either to go ahead with the proposed rulemaking or reject it because the species does not qualify for threatened or endangered status.

Assuming we have made a positive determination, we go ahead and publish a proposed rulemaking. If we had bypassed the previous step, we will at this time, notify the States concerned, in the case of a resident species, or consult with foreign countries in the case of a foreign species.

The public must be given, according to the law, 60 days to comment and the States 90 days when a resident species is involved.

We are simultaneously assembling all the scientific data available to us, checking the common and scientific names of the species, determining the range over which we will list the species, preparing any special regulations that may be needed in the case of a threatened species and drafting a document that complies with the National Environmental Policy list.

Mr. LEGGETT. How big a staff do you have to do this?

Mr. SCHREINER. At the present there are seven professionals and two secretaries. Several of them are new having just recently come on board.

The office staff has averaged about three or four professionals over most of the past 21-month period.

Mr. LEGGETT. Are those professionals full time?

Mr. SCHREINER. Yes, sir. During the 60-day proposed rulemaking period, the public may request a public hearing. Of course, the Secretary has the option of granting the hearing or denying it, but, in either case, he must announce his intentions in the Federal Register.

Sixty to ninety days later, presumably we have additional data which we reconsider and make a final decision at this time about whether to list, delist, or reclassify the species concerned.

The last step is to publish a final rulemaking, and the job is done.

Mr. LEGGETT. How long does that procedure usually take?

Mr. SCHREINER. Assuming no unusual delays it takes from 90 to 120 days at a minimum.

If things do not go well, that is, if it is a very complex situation requiring extensive consultation with many other people, it could easily take a year or more.

Mr. LEGGETT. How many applications are pending with you at the present time?

Mr. SCHREINER. We have 19 petitions requesting us to list 23,962 species of plants and animals. In addition to those, we have initiated action on 144 priority species of our own.

Obviously, Mr. Chairman, many of the species that we have been petitioned to list are not what we would term high priority listings, that is, they will not benefit as much by being declared officially endangered or threatened as other species will, even though they may qualify biologically for the list.

Of those species that we have been petitioned to list, we have initiated action on 3,462. Thus, the listing action has been initiated on a total of 3,606 species.

If you will refer back to your diagrammatic sketch of the listing procedure, I will tell you exactly where we stand on each of the listing actions that we have started since December 28, 1973.

Mr. LEGGETT. Would you say that the petition to include this rather huge number of species and plants has compounded to your target programs?

Mr. SCHREINER. Yes, sir, it has. It tends to compound it considerably, as you would imagine.

Although we have a legal option as to whether or not to follow up on petitions, the fact is that we feel an obligation to the public to respond to their petitions as rapidly as possible, and we have tried

to do that. Again, however, it does compound the situation considerably. There is no question about that.

The publication of a "Notice of Intent to Review the Status" is the first step on the diagrammatic chart. We have published such notice in the Federal Register for 3,231 species. We have drafted or published proposed rulemakings for 359 species, stating our intent to list, delist, or reclassify. We have published a final rulemaking for 16 species.

The number of species for which a listing, delisting, or reclassification has been initiated or completed is 3,606, the majority of which are plants because we accepted the Smithsonian Institution's list of about 3,000 plants that appear to be in trouble as a petition.

Mr. LEGGETT. 3,000 plants.

Mr. SCHREINER. Yes, sir, approximately 3,000 of the total are plants.

Mr. LEGGETT. Now, those professionals that you have, how many are botanists?

Mr. SCHREINER. We have two now. We have had two botanists on-board for less than 6 months. Prior to that, we had none.

Mr. LEGGETT. How do they make investigations of 3,000 plants?

Mr. SCHREINER. Very slowly. But they do have the assistance of botanists in the Smithsonian Institution. I would like to acknowledge their help. It has been very important to us. Without that help, we would not be nearly as far along with the plants as we are.

Our botanists are also actively soliciting and are receiving the help of professional botanists all over the world, particularly here in the United States. And it is with that kind of help that we will get the job done a lot faster. If Fish and Wildlife Service people have to do it all, it will take months, even years.

Mr. LEGGETT. How many animals and how many plants are on the list right now?

Mr. SCHREINER. Right now there are approximately 116 native animals listed and approximately 315 foreign animals.

We just recently added 16 species to the list, and that changes the numbers somewhat. I am not right up to date on the exact numbers.

Most of the currently listed species were inherited with the previous act. We have actually listed 16 species since the new act went into effect.

Considering 3,606 plants and animal species in the pipeline, let me give you some idea of what it costs in manpower and dollars to do this job.

On the average, it takes 36 professional person days and five clerical person days to list a species. This assumes, Mr. Chairman, that we do not have to prepare an environmental impact statement. If we do, it would take much longer.

Mr. LEGGETT. That is endangered species?

Mr. SCHREINER. Yes, it takes about the same length of time regardless of whether a species is to be listed as endangered or threatened.

Mr. LEGGETT. On the basis of that, you would list about 10 plants or animals per person per year?

Mr. SCHREINER. Since there are only approximately 240 working days per years, I figure it a little less than that per person—about 7 per year per person.



Mr. LEGGETT. And you have a total of eight professionals?

Mr. SCHREINER. A total of 7 professionals working on this part time. Listing is not the only thing they have to do. They have other jobs to do as well.

Mr. LEGGETT. All right.

Mr. SCHREINER. And it takes 5 clerical person days, that is a total of 41 person days.

If we figure the average professional person is a GS-13, step 1, and the average clerical person is a GS-5, step 1, the 41 person days cost about \$3,200 per species listed.

Actually, the cost is greater than than, Mr. Chairman, because we investigate some species that do not qualify for the list and, of course, the cost goes on just the same.

I do not offer these figures to be negative or pessimistic, but only to give you an idea of the kind of real financial world that we deal with daily.

I firmly believe that the cost in person power, dollars, time, and effort, required to do the job, will decrease as we perfect the systems that we are using, and as we enlist the aid of a host of other Federal, State, and private agencies.

Mr. LEGGETT. Yes; but I think you have to recognize that if your rate is, as you indicate, and if these are not less than full-time people, if you do not do quite 10 a year on a full-time basis, if you do something like 8, and 8 times 8 is 64, that is cut down, say, to 50, and you divide 50 by 3,000 something, you have 450 years of work.

Mr. SCHREINER. Yes, sir, I am well aware of how long it might take.

With that in mind, Mr. Chairman, when we first recognized the magnitude of the job and the resources we had to do the job, we were needless to say somewhat overwhelmed and a little dismayed. But, rather than walk away or say it is impossible, we took a different approach.

We decided we had to set priorities and do the most important thing first. We have tried to do that. Listing animals was not one of our early priorities. It was not one of the most important things we had to do early on, in our opinion. We have not devoted full time, or anywhere near full time, to the listing effort because of the many other things that had to come first.

Mr. LEGGETT. Well, there is a rule of practicality that is involved here, obviously.

You have 23,000 listed items, but since you have not got the State game and fish, you have indicated, to enforce these, you put too many down and there will be nothing enforced.

Mr. SCHREINER. Yes, sir, that is entirely possible.

We could develop a tremendously big list, and although the listed species would receive some protection under the act, the kinds of things that really need to be done for these species could not be done without a lot more manpower and money than we have at the present, or that I think we are likely to get in the immediate future.

I would like to shift to a different subject, if I might, Mr. Chairman. Section 6, which concerns cooperation with the States. It is imperative that we gain the help and cooperation of the State conservation agencies, as the Director suggested.

To illustrate this point, we have about 180 law enforcement officers in the field. The 55 States and territories have well over 5,000 conservation officers, all experienced lawmen who are very capable of enforcing endangered species laws.

The U.S. Fish and Wildlife Service has only a few hundred field biologists stationed across the United States. The 55 State and territorial conservation agencies have several thousand professional wildlife biologists who are well trained in the management of wild fauna and flora, whether endangered or not.

In addition, the 55 State and territorial conservation agencies own literally millions of acres of land which provide habitat for many endangered and threatened species. Careful and purposeful management of these lands is essential to the recovery of many species.

Mr. Chairman, having worked in both State and Federal conservation agencies in the past 25 years, I know full well that obtaining State help and cooperation is contingent upon two or three things.

First, it is contingent upon developing a mutual sense of trust and respect between State and Federal professionals working on endangered species.

Second, it is contingent upon showing State officials that we truly seek a cooperative effort and not a federally dominated effort.

Finally, it must go without saying that if we could offer the States financial aid, it would encourage them a great deal.

To obtain maximum State cooperation as quickly as possible, we have held numerous seminars across the United States during which we have explained the act and the State's role in implementing the act as we see it. We developed, in cooperation with the International Association of State Game, Fish and Conservation Commissioners, a model State endangered species bill that, if enacted, would give them all of the authority they need to enter into a cooperative agreement with us.

In cooperation with the Department of Commerce, we developed a model cooperative agreement which is now being reviewed by the States to receive their help and recommendations before it is finished.

We developed with the Department of Commerce a set of instructions and guidelines to aid the States in applying for a cooperative agreement. And we have attended dozens of State meetings and answered hundreds of State letters and phone calls requesting additional help or more information.

To date, our efforts have resulted in the qualification of seven States. These States are qualified to sign a cooperative agreement as soon as they complete their review of the draft cooperative agreement document. The States are Colorado, Delaware, Michigan, New Jersey, New Mexico, South Carolina, and Washington.

The authorities and programs of four other States are now being reviewed. California and Florida are very close to qualifying, and we hope that Tennessee and Alaska may be able to qualify in the near future.

We have reviewed the authorities and programs of other States and have found that their authorities and/or their programs are currently lacking. We have discussed with them the additional steps necessary to qualify and hope they will do so soon.

Mr. LEGGETT. What is the reason for so few States participating?

Mr. SCHREINER. In my opinion, sir, the big factor to date has been that they do not feel that they are going to gain very much by participating. The main issue, of course, is the lack of grant-in-aid funds.

Another factor is that they feel that there is no real incentive for them to join in a cooperative agreement because it does not really change anything with regards to a species classified or endangered.

In other words, the States believe that there is still going to be Federal regulation of endangered species even if they have signed a cooperative agreement.

There is much misunderstanding on this particular issue, and it is one that we are trying to clarify as rapidly as possible.

We fully expect to have signed agreements with 15 to 20 States by the end of this fiscal year, and we eagerly look forward to accepting the States as full partners in a national endangered species program.

Now, having achieved a start in obtaining State cooperation, we are concentrating our resources on obtaining inter-agency cooperation at the Federal level. We are attempting as rapidly as possible to implement section 7 of the act, which deals with critical habitat and Federal agency responsibility to help endangered and threatened species and their habitats.

Section 7 provides that all Federal departments and agencies must, in consultation with the Secretary of the Interior or the Secretary of Commerce, utilize their authorities to carry out programs for the conservation of endangered and threatened species that are listed pursuant to section 4 of the act.

Federal agencies must take all precautions necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of endangered or threatened species, and do not result in the destruction or modification of habitats for those species which are determined by either Secretary, after consultation with the affected States, to be critical.

You can imagine, Mr. Chairman, the kind of impact this could have on other Federal agencies.

This, then, is the section that provide for the Secretary to list critical habitats for endangered and threatened species and it is anticipated that these critical habitats will be officially listed in the same way that endangered or threatened species are listed.

As stated earlier, we are just starting to implement this section of the act. We have sent letters to all Federal agencies, advising them of their responsibilities under the act and asking them to take a hard look at where their activities may conflict with either section 7 or section 9. Section 9 is the section that lists prohibited acts.

We also asked them to designate a representative with whom we could coordinate in the future.

We held a seminar to which 69 Federal agencies were invited and 42 were represented. This was held in Washington a few weeks ago, Mr. Chairman. Ninety people were present.

The purpose of this meeting was to again explore Federal agency responsibilities under the act and to seek their cooperation in the listing of critical habitats, and in undertaking programs to help endangered species on federally administered lands.

We established an informal ad hoc interagency group to develop guidelines for other Federal agencies that will help them comply

with the mandates of section 7, including their responsibility to consult with the Secretary before undertaking major actions that would have a substantial effect on threatened or endangered species or their habitats.

We have started drafting rules and regulations to further clarify Federal agency responsibilities. This draft, however, cannot be completed until the previously mentioned ad hoc group completes its work. We anticipate publication of proposed rules and regulations before the end of this calendar year.

We have published a notice of intent to review the critical habitats of the 108 endangered species in the United States that are under the jurisdiction of the Department of Interior. Ten of those species were selected as highest in priority, and their critical habitats will be delineated first.

These species are the Indiana bat, Mississippi sandhill crane, American crocodile, whooping crane, manatee, American peregrine falcon, San Joaquin kit fox, blunt-nosed leopard lizard, the California condor, black footed ferret, and the palila.

We have published a proposed rulemaking on the critical habitat of the Mississippi sandhill crane, and anticipate a proposed rulemaking on critical habitats of the manatee, Indiana bat, American crocodile, whooping crane, snail darter, and the California condor within 30 to 60 days.

In short, Mr. Chairman, we have initiated coordination with other Federal agencies, and we are drafting rules and regulations for Federal and critical habitat listings are imminent.

Section 8 of the Endangered Species Act provided for international cooperation in effecting the recovery of endangered and threatened species in foreign countries.

As stated by the Director, we have not made as much progress in this area as we would like because of fund and personnel shortages. We have, however, made a start in implementing this section.

The Fish and Wildlife Service has participated in foreign programs concerned with the conservation of endangered species in 21 foreign countries. The programs included training foreign nationals in fish and wildlife management, ecosystem preservation, law enforcement, professional consultation, and providing specialized equipment.

Some of this work was accomplished prior to December 28, 1973, but most has occurred since then. In addition, we have assisted 14 other countries with fish and wildlife problems that did not involve endangered species.

We have developed programs totaling \$600,000 that we hope to fund with excess foreign currencies in fiscal year 1976. These programs involve research and surveys designed to pinpoint problems faced by endangered and threatened species in Egypt, India, and Pakistan. These projects are currently being reviewed by the Office of Management and Budget.

I am sorry to inform you that I learned just last night that we will not get those funds in 1976, but have been invited to try again in 1977.

Mr. LEGGETT. Why would that be?

Mr. SCHREINER. I cannot answer that.

Mr. LEGGETT. Are not these block currencies?

Mr. SCHREINER. Yes, sir.

Mr. LEGGETT. They are sitting there, drawing interest without using the interest on the moneys.

I am going to have counsel direct an inquiry on that question.

Who are you dealing with over there?

Mr. SCHREINER. We work with a number of individuals which have responsibilities for various program areas.

Mr. LEGGETT. What department are they in?

Mr. SCHREINER. They handle the budget for the Department of the Interior in the Natural Resources Division.

Mr. LEGGETT. All right.

Mr. SCHREINER. Finally, Mr. Chairman, we have developed a draft Executive order which will designate the scientific and management authorities needed to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This draft Executive order is currently being reviewed by the Office of Management and Budget.

Also, we are developing the internal organization needed to fully implement this convention in anticipation of the funds which we hope Congress will provide us with this year.

To my knowledge only 2 of the 18 countries that have ratified the Convention are ready to implement it now. They are Canada and Switzerland.

I will not continue with the rest of my statement, Mr. Chairman, in order to save time.

I simply would like to have it acknowledged that while all of these new things are being developed and implemented, we have continued with a substantial ongoing program and have made considerable successes in those areas. I will submit the remainder of my statement for the record.

Thank you.

Mr. LEGGETT. Thank you very much, Mr. Schreiner.

Obviously, the composite of all your testimony is that you have had a rather complex task imposed on you in Congress. You intend to comply with it.

You seem to respond, somewhat perhaps coincidentally more in oversight, in that we have listed a crocodile in the past few weeks, but you are trying to put your whole program together with scotch tape and paper clips, and obviously you have got a formidable challenge.

You do not have enough money to do what you have now, and yet I note that you applied for the same amount of money for the next two years as you are currently utilized.

Now, in defense, what we do, we figure out the amount for anticipated cost of living escalation, then we figure out an amount for real growth, areas where we want to change the priorities. We are figuring 4 percent at the present time. We do that on a 5-year basis.

Do you have a program like that in the Fish and Wildlife Agency?

Mr. GREENWALT. In general, we attempt to do this, Mr. Chairman, particularly in the longer term.

On the whole, however, the service has not had great success with the specific advice that you have described.

Mr. LEGGETT. If I ask you for your 5-year baseline program, would you provide it to me?

Mr. GREENWALT. Yes, Mr. Chairman, we can give you our projections in this direction, but it must be recognized that these are simply the plans of the Service and not necessarily those that will be realized after the process of budgeting has been completed.

Mr. LEGGETT. I understand.

What we are concerned with is I understand many times it is advantageous to be a good guy and do not create too many waves, and it looks like you are only going to get \$10 million, apply for \$10 million, because then it does not make the budgeters look too pernicious. But I think it is critical that people at the operating level, specifically what the needs are, and lay it out in terms of personnel, members and growth, and escalation and inflation, spell it out, because if you short circuit the system at your level and you just kind of so-called eat a problem before it surfaces, then the committee, the Congress, sees very little input as to exactly what the problem is. And we get complaints from people that enforcement has not been effective, et cetera, and still, in order to be a good guy, why, many times, some agencies only apply for what they think they will get.

I think that it is utterly critical that you go ahead and express yourself completely and fully, and let the chips fall where they may. And after the application is made, let the Congress determine what the priorities are going to be.

Unless we get that spelled out, we are going to have problems.

Mr. GREENWALT. I agree, Mr. Chairman.

[The following was submitted:]

#### ESTIMATE OF COST

The following attachment is an estimate of the cost of implementing as diligently as possible every program action implied by the Endangered Species Act. These estimates were made without considering any fiscal or personnel constraints and, therefore, do not represent what the Department of the Interior or the Fish and Wildlife Service may recommend after reconsidering these estimates with other programs.

#### ENDANGERED SPECIES PROGRAM

##### FISCAL YEAR 1977-81

The following two tables provide a current [but hurried] estimate of the dollars and man-power that would be required by the Fish and Wildlife Service to implement the Endangered Species Act of 1973 for Fiscal Years 1977 through 1981. The amounts shown are for what we deem to be full implementation of the Act at the optimum level.

Implementation at this level would allow us, among other things, to complete the following major tasks:

1. Carry out the required steps and list approximately 3,000 animals and 4,000 plants and delist or reclassify species as recovery allows.
2. Acquire 500,000 acres of high priority endangered and threatened species habitat.
3. Carry on effective coordination with Federal agencies and private groups and to achieve Cooperative Agreements with at least 48 States and Territories.
4. To establish effective endangered species grant-in-aid programs with 48 States and Territories.
5. Delineate critical habitats for 3,000 animals and 4,000 plants and advise Federal agencies of possible conflicts with Federal actions.
6. Implement and enforce the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

7. Carry on training of foreign nationals in wildlife conservation and provide U.S. consultation with foreign countries on wildlife conservation problems.

8. Control import and export of wildlife and wildlife products and parts.

9. Enforce protection of endangered or threatened wildlife under the jurisdiction of the United States.

10. Maintain an effective system for receiving and processing requests for permits to take or transport listed species and for use of non-designated ports of importation and issue permits when appropriate.

11. Maintain approximately 200 National Wildlife Refuges for protection and management of endangered or threatened species.

12. Maintain an inhouse and contract research program to answer biological unknowns required to list or delist species and to establish effective recovery programs for listed species.

13. Carry on captive propagation of endangered species for release into the wild when all other measures are inadequate.

14. To maintain approximately 100 animal recovery teams and 45 plant recovery teams for optimum recovery effort by cooperating agencies and private groups.

15. To review and comment on Environmental Impact Statements and applications for Corps of Engineer permits to eliminate or minimize impact on listed species or their habitats.

#### ENDANGERED SPECIES PROGRAM<sup>1</sup> FISCAL YEAR 1977 THROUGH 1981

[Dollars in thousands]

| Fiscal year | Section 15 <sup>2</sup> | Grant-in-aid | LWCF      | Excess foreign currency | Positions |
|-------------|-------------------------|--------------|-----------|-------------------------|-----------|
| 1975.....   | \$5,480                 |              |           |                         | 170       |
| 1976.....   | <sup>3</sup> 7,374      | \$2,000      |           |                         | 170       |
| 1977.....   | 19,095                  | 4,000        | \$115,000 | \$600                   | 410       |
| 1978.....   | 21,669                  | 9,000        | 60,000    | 1,000                   | 467       |
| 1979.....   | 23,738                  | 10,000       | 45,000    | 1,000                   | 513       |
| 1980.....   | 25,308                  | 10,000       | 42,100    | 1,000                   | 544       |
| 1981.....   | 27,880                  | 12,000       | 42,900    | 1,000                   | 570       |

<sup>1</sup> Resources required to fully implement the Endangered Species Act at the optimum level.

<sup>2</sup> Funds that would be appropriated under authority of section 15 are further broken down as to purpose in the following table.

<sup>3</sup> President's request but not yet appropriated for 12-month fiscal year.

#### ENDANGERED SPECIES PROGRAM FUNDING NEEDED UNDER SECTION 15

| Purpose                      | Fiscal year (dollars in thousands) |         |         |         |         | Total   |
|------------------------------|------------------------------------|---------|---------|---------|---------|---------|
|                              | 1977                               | 1978    | 1979    | 1980    | 1981    |         |
| Section 4.....               | \$2,150                            | \$2,050 | \$1,700 | \$1,600 | \$1,300 | \$8,800 |
| Section 5 <sup>1</sup> ..... |                                    |         |         |         |         |         |
| Section 6 <sup>2</sup> ..... | 875                                | 1,000   | 1,148   | 1,262   | 1,355   | 5,640   |
| Section 7.....               | 2,970                              | 2,250   | 2,150   | 1,940   | 1,790   | 11,100  |
| Section 8 <sup>3</sup> ..... | 666                                | 1,057   | 1,474   | 1,485   | 1,515   | 6,197   |
| Section 9.....               | 3,745                              | 4,295   | 5,191   | 5,601   | 6,145   | 24,977  |
| Section 10.....              | 524                                | 577     | 630     | 640     | 700     | 3,071   |
| Research.....                | 2,595                              | 4,105   | 3,650   | 4,150   | 4,185   | 18,685  |
| Habitat management.....      | 4,050                              | 4,075   | 4,395   | 4,600   | 4,510   | 21,630  |
| Recovery teams/plans.....    | 1,520                              | 2,260   | 3,400   | 4,030   | 6,380   | 17,590  |
| Total.....                   | 19,095                             | 21,669  | 23,738  | 25,308  | 27,880  | 117,690 |

<sup>1</sup> See section 5 annual requirements under LWCF in preceding table.

<sup>2</sup> Does not include grant-in-aid for which annual requirements are shown in preceding table.

<sup>3</sup> Does not include excess foreign currency program for which annual requirements are shown in preceding table.

Mr. LEGGETT. So I am going to ask you for that 5-year program and personnel wise and dollar wise, escalation wise, and how that relates to fulfilling the—I am not going to say the mandate—fulfilling the law that Congress has enacted.

It may well be that sometimes Congress just enacts something that is far too ambitious. I think that rather than ignoring part of the law, I think we ought to go ahead and repeal parts of the law that are superfluous and enforce emphatically the parts of the law that are critical.

I think that way we will all deal in a better franker way.

We have a vote now on the floor. The motion of Mr. Bauman to lay on the table the Harris resolution of disapproval of the President's plan on the pay raise, which indirectly affects some of the members here.

I am sure you will excuse us while we go and vote, and then we will be back.

[Short recess.]

Mr. BREAUX [presiding]. The subcommittee will come back to order, please.

We will continue, and I understand Mr. Leggett is on the floor right now, so I will be serving as the chairman.

Unfortunately, I had to miss the opening round of testimony. I will ask some questions, but we will start with Mr. Forsythe if he has any questions first.

Mr. FORSYTHE. Thank you, Mr. Chairman. I have a few questions.

Mr. Greenwalt, you referred to an amendment on page 14 of your testimony, "It was apparently inadvertently omitted in the final language of the 1973 act. Likewise, provision to dispose of forfeited property contained in the 1969 was overlooked in drafting the new act."

I believe that your proposed amendment is wide open for the Secretary to dispose of these items as he sees fit.

I wonder if that is not a little too wide open, and why you propose that kind of an amendment.

Mr. GREENWALT. Mr. Forsythe, I would like Mr. Bavin, who is our law enforcement man, who is fundamentally responsible for these kinds of properties, to respond to that question, if I might.

Mr. BAVIN. Mr. Forsythe, the amendment has a caveat in it which says it can only be disposed of consistent with the purposes of the act.

We think that qualifier will be an adequate safeguard.

Mr. FORSYTHE. Does that include Government-held stocks that are now forbidden to enter in State commerce under the act?

Referring specifically, of course, to sperm oil.

Mr. BAVIN. This particular amendment only applies to forfeited property. I suppose if sperm oil was forfeited it would apply.

I think what you are referring to is stocks that the Government owned before the act, and the forfeiture provision did not apply to that. The other provision does.

Mr. FORSYTHE. Another amendment?

Mr. BAVIN. Yes, another amendment included in the proposed bill.

Mr. GREENWALT. Of particular concern of the Fish and Wildlife Service is the practical and appropriate disposal of forfeited items which, I am sure you understand, we have accumulated over the past several years in tremendous quantity. The disposition of these items is presently not regularly covered by GSA regulations. It is difficult for us to dispose of these items, or make proper use of them. The



accumulation of this extremely valuable material is becoming a real problem to us.

Mr. FORSYTHE. The staff says that we did just get language pertaining to the others, and perhaps we will have to come back to that in these hearings.

Mr. GREENWALT. Yes.

Mr. FORSYTHE. Mr. Schreiner, the list of some 3,000 plants that the Smithsonian provided, which they have assessed as being endangered, I believe, or threatened, what procedure are you following?

Are you going back to square 1 in handling those as you would nomination from any other source?

Mr. SCHREINER. Yes, sir, essentially we are.

Two things are important or mandatory under the law.

We must establish an administrative record that we have based our decision on the best scientific and commercial data available in establishing that these plants or animals be listed; and, second, we must comply with NEPA. That is, we must prepare a document that complies with the National Environmental Policy Act.

In addition, we must have a proposed rule and a final rulemaking. There is no shorter way of doing it within the law unless of course, Congress does it for us.

Mr. FORSYTHE. Should it not lead to the using of the Smithsonian's scientific knowledge as the basis of which you move or do you really intend to go back and review those scientific data on a 1-to-1 basis?

Mr. SCHREINER. The Secretary of the Interior, as I see it, must be sure that that scientific and commercial data available to him was reviewed in proposing these species, and I see no legal alternative to that process.

Mr. FORSYTHE. Perhaps it is volume of items that have got the system fairly well slowed down.

Mr. SCHREINER. Yes; the problem increases in magnitude when you think of placing all of the plants and the animals on our list, and they number over 20,000.

Mr. FORSYTHE. You referred to the Service's procedures indicating that nomination petitions should be reviewed in 2 weeks.

I understand that we have some petitions that have been lying around for a lot longer period of time.

Mr. SCHREINER. I do not know which ones you speak of. In the early stages of implementing the act, there were some that were delayed longer because we had several at one time and there were many other emergencies that had to be met at the same time.

Naturally, some of them took longer. You can only do one petition at a time. Our intent, however, is to get the petition, review it, make a determination whether or not it is a substantial proposal or not as required under the act, and then notify the petitioner that we intend to proceed or do not intend to proceed.

Now, the other problem is, Mr. Congressman, that some of the things that come in might be termed requests, though some of them are obviously legal petitions.

In any case, it remains our policy to try to respond as quickly as we can. It may be that early in the development of the program it took longer than two weeks. I am sure that it did, as a matter of fact.

Mr. FORSYTHE. What is the status today? Are there—

Mr. SCHREINER. The petitions that we are receiving currently, are being initially processed in 2 weeks, or less.

Mr. FORSYTHE. I think I do have a little bit more detail.

Mr. SPENSLEY. Mr. Schreiner, with respect to the general procedures for listing new animals, you indicated in your direct testimony that there has been a minimum of 90 to 120 days.

Now, looking at the charts you provided to the committee, unless I read it incorrectly, I see in most cases a minimum of 150 days, and that does not allow for any time to screen and determine whether reviews are warranted, or to do any assessments that are provided for in some of the other boxes.

I am wondering whether, first of all, that figure of 120 days is a correct figure.

Second of all, what is the average time to go through the entire process, or has anyone gone through the entire process?

Mr. SCHREINER. Yes, sir, let me answer your second question first.

The most recent ones we completed, I believe were just about 120 days; the most recent listing was completed last week.

Incidentally, that listing started roughly 4 months earlier.

Now, let me be perfectly clear about the diagrammatic sketch, so that there is no misunderstanding. This second block, where it says "publish notice of intent to review an animal" is not a requirement under the law. It is optional whether we do it or not.

Mr. SPENSLEY. The 90 days is optional.

Mr. SCHREINER. No; we must allow, where a resident animal is concerned, State Governors up to 90 days to respond to our efforts to consult with them, which is required in the law. If they respond quicker, which many of them do, it does not take 90 days. Obviously, some of the governors take the full 90 days.

It would be possible if you had all of the data to support your contentions, including the Governors recommendation if a resident species is involved to do a proposed rulemaking and final rulemaking in about 90 days.

Mr. SPENSLEY. I see. I did not understand that.

Mr. SCHREINER. I am sorry I did not make that clear.

Mr. FORSYTHE. Back to this treatment of petitions.

I have information that 15 professors and zoologists of the National University of Colombia, South America, petitioned the Secretary to have species added to the endangered species list and they have had no acknowledgement.

The other is chimpanzees, by which apparently contains information which should be considered as a formal petition, and apparently no information in the case was ever taken, or that ever receipt was ever acknowledged.

These are two instances that I have some information on.

Mr. GREENWALT. Mr. Chairman, if I may interject for just a moment.

As you are aware, I am being asked to appear before another committee. I would like to be excused, and my two colleagues may remain.

Mr. BREAUX. You can be excused, and thank you for your testimony.

Mr. SCHREINER. Mr. Forsythe, I am not sure of which four species you referred to earlier.

I am familiar with the chimpanzee. I checked up on it just before coming here, and we have drafted a proposed rulemaking which involves several species, perhaps including these other ones that you are talking about, which we anticipate will be in the Federal Register within 30 to 60 days. It is possible that the other four species that you are talking about may be in that listing also, but I cannot be certain because I do not know which ones they are.

Mr. FORSYTHE. Would you—could you say that your procedures today would not have this kind of thing happen in the future?

Mr. SCHREINER. I think it is highly unlikely, sir.

Mr. FORSYTHE. Thank you.

Thank you, Mr. Chairman.

Mr. BREAUX. Thank you, Mr. Forsythe.

Mr. Schreiner, I would like to get into something, of course, we have worked on together and against each other and with each other, and in the—the 120-day period, and that is the procedure on how we handle the American alligator. It has been on the endangered list, and now it has been delisted in three territories in Louisiana.

I remember when we had hearings on the original bill the fact that it was going to be put on the list originally, and it was going to have to take a petition and evidence to take it off. We have gone through that process.

Now, I am not unhappy with the way the process has worked. I think it has worked fairly well. We had wished that it had gone faster.

I thought we had the evidence necessary from the very beginning but, because of the delays that we had built into the act, that we had to go through that, and I am not really unhappy with that—I think it worked fairly well.

We have it now delisted in three parishes. One of the parishes, I saw the last estimate that it had something like 70,000 alligators just in that one parish, 70,000.

What is becoming endangered is the cattle and the people, I am afraid.

Counsel corrects me, it was not 69,999, because I now have one with me.

My question is this, what is the procedure, because I am very familiar with this, the problems that we have now?

We have it delisted, which allows a season alligator hides which, of course, is closely regulated by the Federal officials and the State officials, and by other observatories.

We have the problem now that it is delisted as far as the U.S. Government is concerned, but it is still listed on their national treaty, so we find ourselves in a situation where we could have a legal seizure, but it has nothing to do with the legally taken hides because we cannot transport them into international commerce.

Now, we have this procedure whereby we involve ourselves in trying to get it taken off the treaty.

How long does that take?

Obviously, it does not do any good to have a legal seizure which everybody agrees is all right in that area, but it has nothing to do with the hides after they are taken.

Mr. SCHREINER. Mr. Breaux, let me answer your question in brief, if I may, because, frankly, I am not currently familiar with the process of transferring a species from one appendix to the other, or taken off altogether. But it is something like this—

Mr. BREAU. Is that handling of the international treaty within your jurisdiction or is that State or Commerce?

Mr. SCHREINER. That has not been fully decided yet, Mr. Breaux. That will be decided when the President publishes an Executive order which outlines how the Convention will be handled in the United States.

In other words, that Executive order, when it is signed by the President, will state who the management authority is and who the scientific authority is for the Convention and, at that time, the Convention will become operable in the United States and not until then.

Mr. BREAU. I understand that it is operable, in effect right now, is it not?

Mr. SCHREINER. Before I get myself into a bind talking about things that I am not all that familiar with, I would like to ask the Deputy Assistant Secretary for Fish, Wildlife, and Parks, whom I believe is here, Mr. Bohlen, to respond to that.

Mr. BREAU. Would you please just come up and join us?

Mr. BOHLEN. Mr. Chairman, in answer to your question, the Convention provides that a species like the alligator could be delisted by a vote of the member nations either at meetings of the conference or between conferences—however, there has not yet been a conference and amendments to either appendix 1 or 2 cannot take place until that conference. Thereafter amendments will be possible between conferences. The first conference is tentatively scheduled for the fall of 1976 in Switzerland.

We would have to write the secretariat of the Convention at least 150 days prior to the conference to request a delisting.

There is no way that any species may be removed from the appendix of the Convention prior to the convening of the first conference next year.

Mr. BREAU. I presume that the Interior is making plans to make that request as far as the areas of the United States where you do have a legal jurisdiction?

Mr. BOHLEN. At this point, Mr. Chairman, we have not reached a decision as to whether or not it would be desirable.

Mr. BREAU. I find that very interesting.

Mr. BOHLEN. Yes.

Mr. BREAU. Why would we have any problems now that we made the decision in the three counties or parishes that they are legal, that we would not automatically make a request to the treaty people as far as those counties are concerned—

Mr. BOHLEN. It is one thing to allow the killing in Louisiana and interstate shipment. It is quite another issue to allow international shipment. I will ask Mr. Bavin to describe the enforcement problems that would fall upon him.

Mr. BAVIN. Thank you. As you know, Mr. Breaux, we have established a system within this country to license people who would be tanners, buyers, or fabricators of alligator products or hides. This

system is totally within the control of the United States and, of course, the States.

If the export of raw skins were allowed, the next thing, of course, would be to allow the importation of products made from those skins. As you know, it is extremely difficult to take a purse or a belt and positively identify whether it was made from one species or another species of crocodilian.

So, first of all we have an identification problem facing the enforcement officer upon importation of products made from the crocodiles. As you know, the Nile crocodile, as well as others, are on the endangered species list. We have this initial problem with identification. It is difficult, sometimes impossible, to distinguish between of animals that are different but have similar appearance.

Furthermore, we have a situation where we could not license or control the manufacturer nor inspect his records, books, or his physical facility in another country, to adequately ascertain that there were not smuggled hides being removed from this country to the foreign manufacturer.

As long as we confine the trade to this country, we feel, under the regulations that have been effective as of last Friday, September 26, that we can adequately control the illegal market, which we all know, cannot be completely eliminated.

Mr. BREAUX. I find that very unusual. Are we telling people now that you can have a legal season but you cannot do anything with them?

You say you can do something, you can have a nice hide. There are not any tanners, to my understanding, that do not do any good work with alligator hides in the United States nor are there manufacturers that can compete on any kind of a market with the product.

Mr. BAVIN. Since the regulations were first proposed, we have had several firms express interest in going into this business, who were formerly in some other business associated with the tanning process.

[The following was submitted:]

#### ALLIGATOR LICENSE APPLICATION

As of October 2, 1975, the following individuals and firms have applied for licenses to deal with American Alligators:

C. E. Zimmerman & Company, W. V. Zimmerman, Owner, 2756 Toulouse Street, New Orleans, Louisiana 70119; The Fouke Company, George G. Heinz, Route 1, Box 168, Greenville, South Carolina; George C. Yarborough, P.O. Box 206, Sicily Island, Louisiana 71368; Steven Neumann Tannery Inc., Steven Neumann, Owner, 91 Colden Street, Newark, New Jersey 07103; Columbia Impex Corporation, Armand S. Bennett, 149 Madison Avenue, New York, New York 10016; and MEG Import Corporation, David Klapisch, Director, 403 Charles Place, Leonia, New Jersey 07605.

As of October 2, 1975, the following have requested information on applying for a license or permit but have not submitted applications:

Ernest Drake (alligator farmer), P.O. Box 748, Ponchatoula, Louisiana 70454; John Paul Crain (alligator farmer), Grand Chenier, La. 70643; and Charles Dorrigan, Doric Associates, 468 Frelinghuysen Avenue, Newark, New Jersey 07102.

Mr. BAVIN. I think our position from the enforcement standpoint is that we would be opposed to allowing such export at this time because of a lack of adequate controls.

There is, we think, sufficient interest being displayed to indicate that there would be a market in this country, and our inclination, at least at my level, is to wait and see what happens.

Mr. BREAU. There is no legally taken alligators anywhere in the world other than the three counties in Louisiana.

Mr. BAVIN. No, I did not say that.

Mr. BREAU. No; I am asking you. I know you did not. I am asking you.

Mr. BAVIN. Well, there are certainly several species of crocodilians which are not listed as endangered or threatened under our laws or the Convention.

There is some legal traffic in Europe and in other areas in these kinds of products. You are certainly correct. But the importation of those products has been severely restricted by the Endangered Species Act.

Mr. BREAU. The next question is, do we allow legally taken hides that are not on the Endangered Species Act treaty to be imported in final product form in the United States if they are taken from an area that they allow them to be?

Mr. BAVIN. Certainly.

Mr. BREAU. But we are not going to allow our own trappers who participate in a legally setup season to do the same thing?

Mr. BOHLEN. To the best of my knowledge, virtually all species of crocodilian will be listed in appendix 1 or appendix 2 of the Convention as soon as the Convention goes into force, and we hope to bring a halt to all international traffic on these. We frankly do not want to encourage French industry to process our hides as we have employment problems in this country. And I think it is in everybody's interest to have a local industry to do the tanning.

Mr. BREAU. All right. I look at this as a parochial problem to me, although this committee is directly involved with it also.

One more question: I get a definite impression, am I correct, that you folks do not plan to petition the treaty people to have the alligator taken off the endangered species list?

Mr. BOHLEN. That is our present leaning.

Mr. BREAU. Present leaning?

Mr. BOHLEN. Leaning toward the decision you described.

Mr. BREAU. Mr. Emery.

Mr. EMERY. Thank you very much, Mr. Chairman.

I have been looking at some of the literature that has been brought before us. I have a couple of question, one is relative to the operation of the various State agencies and their cooperation under the Endangered Species Act.

I notice there are quite a few States, including my own, that apparently do not have a program, list or maybe even a plan under consideration.

Are you aware of any areas in the country, or any locations within the States, where there are significant numbers of species or any species, for that matter, that are endangered, where States are not taking action?

Mr. SCHREINER. Mr. Emery, most all States have endangered species and, by far, the majority of States—although I have no exact figures on it—are doing some work with endangered species, some much more than others. The degree of progress depends, of course, on their budget and manpower resources.

Mr. EMERY. I realize that.

To more specifically direct my question, are there any States, regardless of their resources, that have species that are endangered, and these species are not receiving the protection in their State level.

Mr. SCHREINER. Yes, sir, there are many States where endangered species are not protected by state law, and that occurs particularly with respect to the lower forms of animals.

The amphibians, reptiles, molluscs and if we start listing insects in the future, which we are close to doing, many States will not have the authority to protect them.

Mr. EMERY. Do you have a list of the States and species that are particularly endangered?

Mr. SCHREINER. I am sorry, sir, I did not quite understand your question.

Mr. EMERY. You have a list of the States that do not adequately protect species that are endangered?

Mr. SCHREINER. With respect to the 21 State authorities that we have reviewed so far, we can tell you what authorities they lack to qualify for the act.

In many cases, it is their inability to protect one species or another. They lack the authority to protect all endangered or threatened forms of plants or animals that are found in their States.

Mr. EMERY. That information is useful to the committee.

But the question I am specifically asking is, are you aware of any particular species in any particular States that are in grave danger, that are not being adequately protected by either the State or Federal law?

Mr. SCHREINER. Yes, sir.

Let me give you one example that occurs to me immediately.

The Rocky Mountain wolf is not being protected by the State of Wyoming because it is illegal for them to protect it under their State law. This species is, of course, protected by Federal law.

There are others, I know.

Mr. EMERY. I would appreciate that list, as comprehensive a list that you could provide.

[The information to be supplied follows:]

#### STATE AUTHORITY TO PROTECT SPECIES ON THE U.S. ENDANGERED OR THREATENED SPECIES LISTS

The following seven States have satisfied all qualifications to enter into cooperative agreements with the U.S. Fish and Wildlife Service and, therefore, have adequate authority to protect species on the U.S. Endangered or Threatened Species Lists—Colorado, Delaware, Michigan, New Jersey, New Mexico, South Carolina, and Washington.

Fourteen other States may have adequate authority, but our legal review of their laws is not yet complete. Of this number, however, Alaska, California, Florida, and Tennessee will likely soon qualify for cooperative agreements thereby indicating that authority to protect listed species is adequate. Arkansas, Connecticut, Georgia, Louisiana, Missouri, New York, Pennsylvania, and Wisconsin may be able to submit sufficient evidence of their authorities in the near future. Wyoming and Hawaii, however, must await the next sessions of their legislatures to request the needed authorities.

The remainder of the States and Territories have not submitted any of their qualifications for review, and it is not possible for us to determine if their State laws are adequate to protect licensed species.

Prior to enactment of the Endangered Species Act of 1973, the Puerto Rican plain pigeon, Puerto Rican parrot, and the Northern Rocky Mountain wolf in Wyoming could be legally taken. State or Territorial laws do not

provide adequate protection for these species. Other species for which State protection is inadequate have not come to our attention because they are not commonly subject to taking or State laws may already be providing needed protection and because all endangered species are already protected by Federal law under the Endangered Species Act of 1973, the Bald Eagle Act, the Marine Mammal Protection Act, or the Black Bass Act. Only through review of qualifications which States submit for a cooperative agreement, will we be able to determine if State protection of all listed species is adequate.

Mr. EMERY. Referring to section 7, I am concerned about the inter-agency cooperation.

What is the level of cooperation between the various Federal agencies, for whatever purpose they were initially instituted, in protecting species?

Is there a tremendous amount of duplication?

Are you able to communicate and cooperate with the work of say the Smithsonian Institute and the Department of Commerce?

Mr. SCHREINER. Mr. Emery, let me start by saying that cooperation between Interior and Commerce, the agencies that are co-administering the act, has been quite good.

With regard to other agencies, we are just now establishing the interagency communication and cooperation which is essential to a carefully coordinated effort in the future.

However, we have already instituted one program which I would like to recount for you briefly, which minimizes duplication, and avoids getting in each other's way, and working at cross purposes and those kinds of things.

We have established what we call a recovery plan—recovery team operation.

Basically, a recovery team is a small group of some five or six local people at the ground level responsible for endangered species or their habitats. They may be Federal biologists, State biologists, private individuals, and so forth. These people develop an action plan which lists all of the actions necessary to effect the recovery of a species as we see it now.

Those actions are assigned to the various agencies concerned, and each one is given a target date. Then the team oversees that concerned agencies actually accomplish their part of the action.

So in effect, what happens, is that all concerned are working in concert toward a single goal, with no duplication of effort, and no competition. It is an extremely well-accepted program, and we are very pleased with it. We are sure it is going to produce outstanding results in the future.

Mr. EMERY. It is certainly a remarkable situation if that cooperation truly exists.

I have also been very interested in similar laws such as the Marine Mammal Act. We have had legislation before this committee a full month earlier relating to a situation surrounding whales, another marine species.

Do you find that there is any necessary limitation or any conflict between the marine mammals and the endangered species—

Mr. SCHREINER. Mr. Emery, first, all whales are under the jurisdiction of the Department of Commerce and not the Department of Interior.

Mr. EMERY. I understand that.



Mr. BOHLEN. I think, to answer your question, Mr. Emery, no, we see no conflict.

Mr. EMERY. You do not see areas where one act or the other act needs to be dovetailed more?

Mr. BOHLEN. No, I believe there are hearings coming up within a matter of weeks on the Marine Mammal Act, and we will take a look at that problem for you in anticipation of those hearings. But, at the moment, I can think of no conflict.

Mr. EMERY. Thank you very much.

I have no further questions.

Mr. Schreiner, a point that Mr. Emery raised on the species of the Rocky Mountain wolf.

Mr. BREAUX. I just have one other point.

We apparently have some problems with the State law that says that you cannot regulate it. I did not think we had any problems with the Endangered Species Act superseding the State law.

We had a law in Louisiana saying that you could take the alligator. Once you have it, then you can take it.

Does not it preempt it?

Mr. SCHREINER. Preempt is not the right word, Mr. Breaux.

Mr. BREAUX. I could use some other ones. That is the nicest one I could think of.

Mr. SCHREINER. If the State has the authority and the desire to protect a species they are not being preempted. If they do not have the authority to protect the species, then we have it.

What I was referring to is that the State of Wyoming does not have the authorities required by the act to enter into a cooperative agreement with us because they do not have the authority to protect the Rocky Mountain timber wolf, and it is an endangered species on the Federal list.

This species resides in their State, and in order to qualify for a cooperative agreement, they must have authority to protect that animal, and they do not have it at present.

Mr. BREAUX. It seems like a problem with our endangered species law.

If you folks say it needs to be protected, then the folks in Wyoming disagree with that, then we have a problem.

I do not understand really why, because we had the situation in my home State, and it did not seem to create any problems for you folks.

Mr. SCHREINER. Well, again, I was referring entirely to the authorities that a State must have in order to qualify for a cooperative agreement under section 6.

Louisiana does not have those authorities either, Mr. Breaux.

Mr. BREAUX. What happened with the alligator?

Mr. SCHREINER. Louisiana has not entered into a cooperative agreement with us because they do not have the required authorities. If they did, it would make the whole matter much more simple and better for the State.

Mr. FORSYTHE. Will the gentleman yield?

Mr. BREAUX. Yes.

Mr. FORSYTHE. I have one point in this area.

The fact is that Federal preemption did eliminate the alligator from interstate commerce. How about intrastate commerce?

Mr. BAVIN. What Mr. Schreiner is explaining is that the State does not have a law which complements the Federal law. In fact, it has no law—

Mr. FORSYTHE. They do not anticipate enforcement?

Mr. BAVIN. You cannot preempt a nonexistent law. The Federal law does apply.

Mr. BREAUX. Then the problem is one of enforcement.

You fellows have authority to prevent the taking of an animal and it then becomes a problem of enforcing, which you lack the manpower to do that.

Mr. BAVIN. That is correct. As Mr. Schreiner was explaining, a State cannot enter into this cooperative agreement unless they have a law which makes taking endangered species illegal.

Mr. BREAUX. That is one of the reasons that I am sure the other members of the committee would like to see a little more aggressive attitude as far as making sure that your budget, your enforcement procedures, and your manpower is adequate in this area.

They can just say to heck with this species, and we do not expect two agents to cover the whole State. We know you are not going to be able to do the job adequately.

Mr. FORSYTHE. It was considered by Mr. Greenwalt that we need more grant in aid to get the States willing to do those things that are necessary, and rather than again building a tremendous Federal bureaucracy and enforcement program.

Mr. BREAUX. If there are no other questions—majority counsel, excuse me.

Mr. SPENSLEY. I want to touch on a couple of items. I guess they would be more appropriately addressed to Mr. Bohlen.

I am sure you are familiar with the snail darter in the Tennessee River and the proposed listing of that.

If that is listed as an endangered species, will the Interior Department be prepared to go to court to enforce its authority and responsibility under the Endangered Species Act—

Mr. SCHREINER. I think the answer is no, sir.

One Federal agency does not sue another Federal agency, as you know.

However, I think it would have to be very clear that the Federal agency who has violated, or who may be in violation of the law, has opened itself to suit from other sources.

Mr. SPENSLEY. I am not necessarily suggesting a suit, Mr. Schreiner, but would the Department be willing to make requests in writing to the TVA to stop the decision of the critical habitats, the snail darter, before adequate research is completed?

Mr. SCHREINER. Yes, sir, we have clearly taken similar steps. We will submit to you a copy of our letter to TVA on the subject.

[The following was submitted:]

UNITED STATES DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
Washington, D.C., March 7, 1975.

Mr. LYNN SEEGER,  
General Manager, Tennessee Valley Authority, Knoxville, Tenn.

DEAR MR. SEEGER: The U.S. Fish and Wildlife Service has been petitioned under the Endangered Species Act of 1973 (16 U.S.C. §§ 1531-43) (hereafter, the Act) to list as "endangered" a species of fish—the snail darter, *Perciana (Imostoma) sp.*—recently discovered in a short segment of the Little Tennessee River. A copy of the petition is enclosed. Upon a review of the petition,

the Service has found that the petitioners have presented substantial evidence of existence of a discrete, new species and of danger to its continued existence. Accordingly, the Service will publish a Notice in the Federal Register to the effect that a thorough review of the species' status is warranted by the substantial evidence contained in the petition. And in light of the petitioner's data, the Service pursuant to section 4(f)(2)(B)(ii) of the Act (16 U.S.C. § 1533(f)(2)(B)(ii)), has requested Governor Blanton of Tennessee to agree to a period of comment of less than 90-days duration for an "emergency" listing which would take effect, for 120 days, upon its publication. If Governor Blanton consents to such a shortened period, the species would be listed as "endangered" without advance notice. The Service also will be proposing a regulation listing this species as "endangered" under the conventional listing process, pursuant to sections 4(a) and (b) of the Act (16 U.S.C. § 1533(a) and (b)).

In other words this species could be listed as "endangered" within a very short period if Governor Blanton consents and will in any case be the subject of a rulemaking that could list it as "endangered" within 3 months.

The responsibilities of the various Federal agencies to federally listed Endangered or Threatened species are contained, in part, in the Act's section 7. That section provides, *inter alia*, that:

"... All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 1533 of this title and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical. (16 U.S.C. § 1536)"

Thus, if the species of "darter" with which the petition deals should be listed as Endangered or Threatened by the Service, section 7 would operate as a mandatory prohibition of any Federal or federally authorized action which would result in jeopardy to the darter's continued existence.

In addition, Congress has declared it to be a national policy that "... all Federal departments and agencies shall seek to conserve Endangered species and Threatened species and shall utilize their authorities in furtherance of the purposes of this Act" (Endangered Species Act, Section 2(c), 16 U.S.C. § 1531(c)). Formal Federal listing under 16 U.S.C. § 1533 would not appear to be necessary to invoke at least the spirit of this policy statement: The definitions in the Act of both "endangered species" and "threatened species" refer not to the Federal processes of review and listing, but to the biological condition of the individual species.

Therefore, although I recognize that the history of the Tellico Project has been a protracted one, and that further delays will present problems to the Tennessee Valley Authority, I believe the Act requires me to request that the Authority undertake a thorough technical review of the effects of the Tellico Project, including the present timber cutting on the Little Tennessee, upon this species of "darter." I also request that the Authority take all measures it can to conserve this species. Finally, I request that the Authority promptly initiate action plans to preserve this species and that it advise us of the actions it contemplates in this regard.

In all these matters, the United States Fish and Wildlife Service stands ready to cooperate with the Authority in the fullest, and to offer any and all assistance at their disposal.

Sincerely yours,

NATHANIEL P. REED,  
*Assistant Secretary for Fish and Wildlife and Parks.*

Mr. SPENSLEY. All right.

Has TVA submitted a plan to you to protect the snail darter?

Mr. SCHREINER. No, sir, they have submitted no such plan to my knowledge.

However, I am aware of the fact that they are trying to transplant the snail darter into other drainages.

Mr. SPENSLEY. To change the subject a bit.

The Endangered Species Act authority is quite broad, and given the amount of work that has been described this morning by the

Fish and Wildlife Service, one might be concerned about the lack of successes in turning something out of the pipeline. Have any other Departments within the Interior Department or within any agencies within the Department, or any other Federal departments requested delegation of any authority to enforce the Endangered Species Act other than the Department of Commerce, of course?

Mr. BOHLEN. Mr. Chairman, there is pending within the Department now a proposed amendment to the departmental manual which would delegate to the Bureau of Land Management some of the most important authorities under the Endangered Species Act.

This has not yet come to a final decision in the Department. I can say that we will strongly oppose any such redelegation.

We think it would set a very unfortunate precedent. Obviously, if the Bureau of Land Management had a right to determine its own critical habitat, other agencies, such as the Forest Service and the Corps of Engineers, would quite rightfully request similar authority.

Mr. SPENSLEY. Would you be so kind, with the chairman's permission, I think it would be helpful to the committee if we could see any documents or papers with respect to requests that have been made so that we could have an opportunity to comment on that?

Mr. BOHLEN. We would furnish them for the record.

[The information to be supplied follows:]

#### PROPOSED AMENDMENTS TO DEPARTMENTAL MANUAL

The following attachment is a proposed amendment to the Departmental Manual. This amendment has been proposed by the Bureau of Land Management, because the Bureau believes it would help them in the management of the public lands and the administration of the various pieces of legislation for which they are responsible. The Assistant Secretary for Land and Water Resources and the Associate Solicitor for the Energy and Resources Division have concurred in this proposal. Other divisions of the Solicitor's Office have not reviewed this proposal as of this time and thus the Solicitor has not approved the proposal. If the Fish and Wildlife Service or the Assistant Secretary for the Fish, Wildlife and Parks oppose the proposal, then the Assistant Secretary for Program Development and Budget will review the proposal for its policy implications. The Assistant Secretary for Management will also review the proposal. Once all of these review procedures are complete, the Secretary of the Interior will make the final decision on the proposed amendment.

#### ENDANGERED SPECIES ACT OF 1973—DELEGATION OF AUTHORITY

1. A recent opinion of the Assistant Solicitor, Fish and Wildlife, implies that it will be necessary for the Director of the Fish and Wildlife Service (FWS) to review any or all BLM actions.

2. According to FWS regulations being considered, the Director of the BLM would be required to obtain a positive or negative declaration of endangered species involvement in each action to ensure compliance with Section 7 (Interagency Cooperation) of the Endangered Species Act (ESA).

3. The FWS currently has the Interior Department's only delegation for implementation of the ESA; the only other Federal agency with a delegation of authority under the Act is the National Marine Fisheries Service in the Department of Commerce.

4. This lack of delegation ignores BLM land management mandates, the wildlife expertise of the BLM, the thoroughness of the Bureau's planning system, the effectiveness of the NEPA process, and the BLM's policy to preserve and protect endangered species habitats.

5. By monitoring all BLM programs, and designating critical habitats ahead of program implementation, the Director of the FWS will exercise undue control over BLM actions and decisions.



## DEPARTMENTAL MANUAL



## TRANSMITTAL SHEET

|   |   |                |
|---|---|----------------|
| PART<br>235 DM 1  | SUBJECT<br>DELEGATION   | RELEASE NUMBER |
| FOR FURTHER INFORMATION, CONTACT<br>Bureau of Land Management | General Program Delegation<br>Director, Bureau of Land Management | DATE           |

**EXPLANATION OF MATERIAL TRANSMITTED:**

This Departmental Manual Release 235 DM 1 revises the delegation to the Director, Bureau of Land Management, to include authority for administering those sections and subsections of the Endangered Species Act of 1973 (87 Stat 884; 16 U.S.C. 1531-1543) that involve his surface and subsurface land management responsibilities. These sections and subsections are: 2; 3; 4(d), (f)(2); 5(a)(2), b; 7, 9, 11, and 15.

Subparagraph 235 DM 1.1(F) is added.

Secretary of the Interior

**FILING INSTRUCTIONS:****Remove:**

235 DM 1  
(1 Sheet)

**Insert:**

235 DM 1  
(1 Sheet)

4. SUMMARY OF DOCUMENT CONTENTS: In a revision, give title for chapter.

This Departmental Manual Release 235 DM 1 revises the delegation to the Director, Bureau of Land Management, to include authority for administering those sections and subsections of the Endangered Species Act of 1973 (87 Stat 884; 16 U.S.C. 1531-1543) that involve his surface and subsurface land management responsibilities. These sections and subsections are: 2; 3; 4(d), (f)(2); 5(a)(2), b; 7, 9, 11, and 15.

RM 01-220 (4-73)

## DEPARTMENT OF THE INTERIOR—DEPARTMENTAL MANUAL

*Delegation—Part 235 Bureau of Land Management—General Program Delegation: Chapter 1.—Director, Bureau of Land Management*

## 235.1.1

## .1 Delegation

A. The Director, Bureau of Land Management is authorized, except as provided in 200 DM 1, to exercise the program authority of the Secretary of the Interior with respect to the management of the public domain, acquired lands, and the submerged lands of the Outer Continental Shelf under its jurisdiction, including all associated functions which relate thereto.

B. The Director, Bureau of Land Management is authorized to execute conveyance for lands for airport purposes pursuant to Section 16 of the Federal Airport Act of May 13, 1946 (60 Stat. 179 U.S.C. 1115), provided that such conveyances also be approved by the appropriate official of the Office of the Attorney General.

C. The Director, Bureau of Land Management is delegated the Secretary's authority to carry out the purposes of Public Laws 90-542 and 90-543 relating to the selection and location of boundaries, property acquisition, development, and administration for assigned components of the National Trails System and Wild and Scenic Rivers. This authority will be exercised in accordance with the provisions of 710 DM 1.

D. The Director, Bureau of Land Management is authorized to exercise the authority of the Secretary regarding the administration of the Lower Colorado River Land Use Plan as described in 613 DM 1.

E. The Director, Bureau of Land Management is delegated the Secretary's authority for administering the Wild Free-Roaming Horse and Burro Act (85 Stat. 649; 16 U.S.C. 1331-1340) including the enforcement authority specified in Sec. 8(b) of the Act.

F. The Director, Bureau of Land Management, is delegated the Secretary's authority for administering the following sections and subsections of the Endangered Species Act of 1973 (87 Stat. 844; 16 U.S.C. 1531-1543): 2; 3; 4(d), (f) (2); 5(a) (2), b; 7, 9, 11, and 15.

## .2 Limitation

A. The following authority is not delegated in the general authority listed in 235 DM 1.1:

## 235.1.2A(1)

(1) Any act not in accordance with the general policies, procedures, or regulations of the Secretary of the Interior.

(2) Any action to be taken with the approval or concurrence of the President, or the head of any department or independent agency of the Government (other than conveyance of land for airport purposes noted in 235 DM 1.1B above).

(3) Authority to issue, revoke or modify withdrawals or reservations of public domain lands.

(4) Authority to issue calls pursuant to the Outer Continental Shelf Act for submission of requests for oil and gas and other mineral lease offerings, and to publish notices of the offer of lands for leases, unless prior approval of a Secretarial officer is obtained.

(5) Approval of oil and gas leases on lands within wildlife refuges unless prior authorization is obtained from the Secretary of the Interior.

(6) Any function pertaining to oil and gas deposits that involves approval or execution of unit or cooperative agreements, communitization agreements, subsurface storage agreements, operating, drilling, or development contracts without regard to acreage limitations, or the sale of royalty oil taken in amount of production.

(7) The appointment of members to the National Advisory Board Council, the State O & C Advisory Board, and Coos Bay Wagon Road Appraisal Committee.

(8) Issuance of orders pursuant to 43 CFR 2801.1-5(m), requiring discontinuance without liability or expense to the United States of the use of a right-of-way for the purpose granted.

(9) Any functional assignment or delegations of other bureaus or offices of the Department as provided for in the regulations or orders of the Secretary of the Interior.

Replaces 4/22/75 No. 1754.



Mr. SPENSLEY. With respect to section 7 of the act, I am somewhat discouraged in the progress that has been made with respect to designating critical habitats.

I recall reviewing the presentation made by the Fish and Wildlife Service to Congressman Dingell last November in the report, which has been done since the 1973 amendments, and recall, at that time, that they indicated they were about to propose the concept of critical habitats in guidelines.

Yet, as I note, the Federal Register, it has been some 7 months since that time that anything appeared in the Federal Register with regard to critical habitats.

It seems to me that that is one of the most important parts of this Act and, to my knowledge, we have only one habitat so far designated, that being the sandhill crane.

Would you like to comment on that?

Mr. SCHREINER. Yes; I would.

There have been several actions taken in the Federal Register. Several months ago, we published a concept of critical habitats as the Department of Interior sees it. That was our first step.

Mr. SPENSLEY. That was April 16—

Mr. SCHREINER. Approximately. I do not know the exact date, sir.

More recently, we have published a notice of intent to review the critical habitat of 108 species that are under the jurisdiction of the Department of Interior.

In addition, we have listed 10 very high priority species which we intend to work on first. Along with that, we have notified all of the States concerned, asked for their help, and notified all of the Federal Agencies concerned and asked for their help.

Finally, we have held the meeting referred to earlier with all Federal Agencies and attempted to get their help and their cooperation with doing this job, and we established an ad hoc group to develop guidelines which we believe will help Federal agencies to comply with section 7.

As you can understand, this section of the act has a potential impact on almost every major Federal action. The development agencies are very concerned about it, and rightfully so.

We have not moved rapidly in this area, but I think we have moved judiciously and we are on the right track. We are very close to implementing that section.

Mr. SPENSLEY. Let me ask one more question in regard to the international convention.

The United States played a major role in that work, and I think it is fair to say that perhaps even as far back as 1961, when the United States took the lead in convening the meeting, to proceed with the convention, we have had, since that date, some 14 years perhaps to prepare.

It might be fair to say that we have had at least 5 years in which we knew the convention would be coming into effect and, yet, only recently, as a matter of fact, I think within the last 5 days, if I am not mistaken, the Interior Department has just submitted to OMB the design of a management and scientific authority or plan for approval.

I guess my question is obvious, why has it taken us so long?

Mr. BOHLEN. We grant you that this is something we could have and should have tackled a lot sooner. It is not fair to say we began 5 days ago.

We began last spring, as soon as we got word that the 10th nation was about to grant ratification and that the convention would be going into effect July 5.

The problem of designating the management and scientific authorities under the convention is fraught with the problems of rivalries between Government Agencies.

I think if we were acting alone on this, we would have had this settled months ago.

We held meetings in late spring and early summer with all the other involved departments of the Federal Government to try and come up with the best way of handling the implementation requirements of the convention.

We have, I think, reached nearly general agreement, and the action you referred to 5 days ago was our submission to OMB of a draft Executive order for the President to sign.

I hope we have now ironed out all of the problems and that OMB will clear this very rapidly.

I know there is, in many people's minds, a feeling that we have not acted fast enough to implement the convention. I have just returned from discussions with the staff of the IUCN, the secretary of the convention. It is clear that we are still months away from any implementation of this convention. Although 18 nations have now ratified, only 3 or 4 have designated management authorities, and only 2, as far as I know, Canada and Switzerland, are prepared to move ahead.

The convention, as you know, requires us to restrict imports of species on appendixes 1 and 2 without export permits.

At the moment, there is no country in the world issuing these export permits, so there is no way we can logically enforce the Convention.

We have proposed interim regulations which we submitted to the other agencies early in the summer. I believe we are about to get clearance from the Department of Commerce on that, and, I hope, the Department of Agriculture.

All I can say is that by the time the world community is ready to implement the convention, we will be ready ourselves.

Mr. SPENSLEY. We must recognize that we have lost the lead in that particular area. We will be the fifth or sixth nation to come on line implementing those authorities.

Mr. BOHLEN. I do not think we were the first to lose the lead. We were the first to ratify.

We will be ahead of most nations in implementation. We are working closely with the IUCN to get them to put more money and effort in establishing a secretariat. Until that is set up, we will not have effective implementation.

I should also say that in terms of the market for endangered species products, the U.S. market is closed, the other major market in the world is Europe. There is now a dispute in the European market as to who can ratify. For instance, although West Germany has ratified, she has been told not to submit documents of ratification

to the depositary government until all the other European countries have ratified the Convention.

The European problem is the major one I see in slowing up implementation of the convention.

Mr. MANNINA. With respect to section 7, can you explain why you have not published what information does exist on the critical habitat to serve as a tentative guide to agencies?

Mr. SCHREINER. I am sorry, sir, I am afraid I did not quite understand the question. Will you repeat it?

Mr. MANNINA. Can you explain why when you began your study on critical habitats you did not publish what information did already exist to serve as a preliminary guide to the agencies?

Mr. SCHREINER. Well, we have published the information which exists.

We have published a notice in the Federal Register describing our concept of critical habitats.

Mr. MANNINA. I am talking about specific geographical information.

Mr. SCHREINER. You mean why we have not actually listed critical habitat as yet?

Mr. MANNINA. Why you did not list what was known at that time.

Mr. SCHREINER. Well, sir, with respect to the Mississippi sandhill crane we are now developing that data, and I assume you are speaking of the specific boundaries that will outline the critical habitats. That is what we are doing now. That was the reason for the publication in the Federal Register of our intent to determine the critical habitats of the 108 species on 10 priorities, whooping cranes, crocodiles, and other species we think will benefit most by having their critical habitats listed first.

We are actually working on determining the critical habitat now, and as soon as we get the data, we will publish in the Federal Register.

Mr. MANNINA. In other words, the critical habitat for only one endangered species is known?

Mr. SCHREINER. Only one has been completely established at this time, yes.

Mr. MANNINA. On page 2 of your testimony, you state that many of the species you have been asked to list are not of high priority and are therefore not listed as endangered even though they may qualify biologically on the list.

Does that mean that the Department sometimes fails to list a species even though it is biologically endangered?

Mr. SCHREINER. It does not mean we failed to, sir.

It means that there are other species that will benefit more by being listed first.

Mr. MANNINA. Do you have a backlog of species that you consider endangered but which are not listed because of low priority?

Mr. SCHREINER. Yes, sir.

I would suggest that there is at least half of the 20,000-plus species that we are now working on that are not high in priority.

Mr. MANNINA. Just one last question for Mr. Bavin.

Your testimony indicates that the Department has a keen awareness of problems that have confronted zoological breeders. You

indicate that your awareness started right after the act took effect.

Given that keen appreciation, can you indicate why it took so long to promulgate regulations to provide some relief for zoological breeders?

Mr. BAVIN. As Mr. Greenwalt pointed out in his testimony, sir, the initial concept was generated. However, the Department felt that legislation was necessary, and we testified before Congress in the last session on such an amendment.

Since that time, we have determined that we can do it through a regulatory process.

I might point out, though, that at this point there are no species listed as self-sustaining. The recent regulations set up a framework for that. I want to make that clear, because it may be misleading.

Mr. MANNINA. Thank you.

Thank you, Mr. Chairman.

Mr. BREAUX. Thank you.

Thank you, gentlemen.

I do also want to make you aware that on Monday, the 6th, we have scheduled some—another session. Perhaps we might be calling someone back to be with us at that time.

Mr. Emery has a question.

Mr. EMERY. In response to a question a few minutes ago, you stated that you established a list of high priorities and low priorities even though some species might be considered endangered or threatened.

You would not desire to list them?

Mr. SCHREINER. No, sir.

Mr. EMERY. I am not sure that I understand why, if the species is justifiably considered threatened or endangered, that you would not act immediately and put it on the appropriate list.

Why is there delay? Why do you have to hesitate?

Mr. SCHREINER. Obviously, I have not been clear. Let me try again.

We have a list now of some 20,000 species that may or probably do qualify. We think they are in trouble. We will only know after extensive study. But, of those 20,000, there may be 500 or 600 that are very high in priority and should be done first.

I did not mean to suggest to you, sir, that we were not going to list those that qualify, simply, that we must determine which are the highest priority, which will benefit most by being listed and do them first.

Mr. EMERY. No, I do not think you understood.

My question is, you have already determined that there are some 600 immediately in danger; that you have made the necessary determination. Why, in fact, are not they listed? What is the delay?

Mr. SCHREINER. Because there there is a great deal of work—I am sorry, I believe you were not here, Mr. Emery, when we went through the process for listing.

The process is very complex, and it requires a lot of basic ground-work to get it done.

We simply do not have manpower or funds to work on 20,000 species all at one time.

Mr. EMERY. I thought I understood you to say that you had already made the determination of that 20,00 of some 600.

Mr. SCHREINER. No, sir, they are simply suspect. It is a shopping list, this 20,000.

We think they may be in trouble, but a lot more review will have to be accomplished to make that determination.

Mr. EMERY. You are saying in point of clarification that those 600 have not been shown to be endangered, but someone indicates they may be?

Mr. SCHREINER. That is right. They may be or they may not be. After our review, if they are, we will list them. If not, we will drop them out.

Incidentally, to give you a more classic example of the way things are going so far, we review about two species for every one that we find that is actually qualified to be listed.

Mr. EMERY. Thank you very much, Mr. Chairman.

Mr. BREAUX. Thank you.

If counsel has any questions, perhaps we could get them to you before the Monday session.

Gentlemen, we thank you very much for your testimony.

[The following was submitted:]

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C. September 26, 1975.

Hon. ROBERT L. LEGGETT,  
*Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, House of Representatives, Washington, D.C.*

DEAR MR. LEGGETT: Answers to questions contained in your letter of September 22, 1975, to Assistant Secretary Reed regarding the upcoming oversight hearings on the Endangered Species Act are enclosed. If you wish further information prior to the hearings, we will be pleased to provide it.

Sincerely yours,

LYNN A. GREENWALT, *Director.*

Enclosure.

(1) In light of the expanded coverage of the 1973 Act, how many additions have been formally made to the lists of Endangered or Threatened plants and animals since 28 December 1973?

#### ANIMALS

| Endangered species           | Date proposed | Date listed    |
|------------------------------|---------------|----------------|
| American crocodile.....      | Apr. 21, 1975 | Sept. 25, 1975 |
| Scoto madtem.....            | do            | Do.            |
| Bayou darter.....            | do            | Do.            |
| Po'o'uli.....                | do            | Do.            |
| Hawaiian creeper.....        | do            | Do.            |
| Peninsular pronghorn.....    | do            | Do.            |
| Cedros Island mule deer..... | do            | Do.            |

#### PLANTS

None.—74 species on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora were proposed for addition to the list on September 25.

60 day comment period now underway.

**ANIMALS**

| Threatened species.....    | Originally proposed under 1969 act | Date proposed | Reproposed under 1973 act | Date listed   |
|----------------------------|------------------------------------|---------------|---------------------------|---------------|
| Eastern gray kangaroo..... | Jan. 15, 1973                      |               | Apr. 1, 1974              | Dec. 30, 1974 |
| Western gray kangaroo..... | do.                                |               | do.                       | Do.           |
| Red kangaroo.....          | do.                                |               | do.                       | Do.           |
| Grizzly bear.....          |                                    | Jan. 2, 1975  |                           | July 28, 1975 |

**(2) What species have been delisted or reclassified?****ANIMALS**

| Species                         |   | Date proposed | Date changed   |
|---------------------------------|---|---------------|----------------|
| Lanlhontan cutthroat trout..... | Reclassified endangered to threatened.....  | Apr. 17, 1975 | Sept. 16, 1975 |
| Paiute cutthroat trout.....     | do.....   | do.....       | Do.            |
| Arizona trout.....              | do.....   | do.....       | Do.            |
| American alligator.....         | 3 Louisiana counties reclassified endangered to threatened/similar in appearance. | July 19, 1975 | Sept. 26, 1975 |

**PLANTS**

None.

(3) How many critical habitat areas have been formally protected under Section 7 of the Act?

Area: Jackson County, Mississippi (Mississippi sandhill crane); acres: 100,000; date protected: June 30, 1975 (temporary emergency measure expires late October).

Formal proposed rulemaking to list as critical habitat published 9/13/75. Sixty-day comment period now underway.

In addition, Notice of Review has been published for determination of critical habitat for 108 U.S. species with emphasis on 10 priority species.

(4) How many State cooperative agreements have been formally consummated?

None. Seven States have qualified for cooperative agreements. Fourteen others have submitted programs and 10 of these are not yet qualified. The other 4 are now under review.

In cooperation with the International Association of Game, Fish and Conservation Commissioners, we developed a model "nongame and endangered species" bill to aid the States in passing legislation to gain the necessary authorities, if they so desired. We also developed guidelines to aid in their submission of programs for our review. On August 5, 1975, a draft model cooperative agreement was sent to all States for their review. After their comments are received and analyzed, we will draft the final cooperative agreement and sign up all the States that have qualified. We expect to have at least 10 and perhaps as many as 20 States under cooperative agreement by the end of this fiscal year.

**STATUS OF COOPERATIVE AGREEMENTS**

The following 7 States have satisfied all qualifications to enter cooperative agreements: Colorado, Delaware, Michigan, New Jersey, New Mexico, South Carolina, and Washington.

The 4 States which have submitted programs now in the review process include (in some cases these are resubmissions for review): California, Tennessee, Florida, and Alaska.

The 10 States which were found to have authorities and/or program lacking include: Arkansas, Connecticut, Georgia, Hawaii, Louisiana, Missouri, New York, Pennsylvania, Wisconsin, and Wyoming.

Alabama—No authorities or program submitted.

Alaska<sup>2</sup>—State resubmitted authorities and program 8/27/75. Now under review.

Arizona—No authorities or program submitted.

Arkansas<sup>3</sup>—Authorities lacking. Letter to SOL 7/15/75.

California<sup>2</sup>—Legal authorities satisfied. State notified 6/23/75. We are now awaiting program submission.

Colorado<sup>1</sup>—Qualifies for agreement. State notified 6/13/75.

Connecticut <sup>2</sup>—Authorities lacking. Letter to SOL 7/25/75.  
 Delaware <sup>1</sup>—Qualifies for agreement. State notified 7/1/75.  
 Florida <sup>2</sup>—State resubmitted clarification 9/9/75. Now under review.  
 Georgia <sup>2</sup>—Authorities lacking. State notified 9/16/75.  
 Hawaii <sup>2</sup>—Authorities, program lacking. State notified 6/9/75.  
 Idaho—No authority or program submitted.  
 Illinois—No authority or program submitted.  
 Indiana—No authority or program submitted.  
 Iowa—No authority or program submitted.  
 Kansas—No authority or program submitted.  
 Kentucky—No authority or program submitted.  
 Louisiana <sup>2</sup>—Authorities lacking. State notified 3/5/75. Program not submitted.  
 Maine—No authority or program submitted.  
 Maryland—No authority or program submitted.  
 Massachusetts—No authority or program submitted.  
 Michigan <sup>1</sup>—Second submission submitted 5/21/75. State now qualifies. State notified 7/7/75.  
 Minnesota—No authority or program submitted.  
 Mississippi—No authority or program submitted.  
 Missouri <sup>2</sup>—Authorities lacking. State notified 9/27/74.  
 Montana—No authorities or program submitted.  
 Nebraska—No authority or program submitted.  
 Nevada—No authority or program submitted.  
 New Hampshire—No authority or program submitted.  
 New Jersey <sup>1</sup>—Qualified—State notified 6/17/75.  
 New Mexico <sup>1</sup>—Qualified—State notified 7/16/75.  
 New York <sup>2</sup>—Authorities lacking—Letter to SOL 8/21/75.  
 North Carolina—No authority or program submitted.  
 North Dakota—No authority or program submitted.  
 Ohio—No authority or program submitted.  
 Oklahoma—No authority or program submitted.  
 Oregon—No authority or program submitted.  
 Pennsylvania <sup>2</sup>—Last authorities submitted 2/19/75—lacking, State notified 5/30/75.  
 Rhode Island—No authority or program submitted.  
 South Carolina <sup>1</sup>—Qualified—State notified 7/7/75.  
 South Dakota—No authority or program submitted.  
 Tennessee <sup>2</sup>—Authorities submitted 8/18/75. Under review.  
 Texas—No authority or program submitted.  
 Utah—No authority or program submitted.  
 Vermont—No authority or program submitted.  
 Virginia—No authority or program submitted.  
 West Virginia—No authority or program submitted.  
 Washington <sup>1</sup>—Qualified—State notified 6/23/75.  
 Wisconsin <sup>2</sup>—Authorities lacking—letter to SOL 8/19/75.  
 Wyoming <sup>2</sup>—Submitted 11/19/74, program lacking. State notified 2/11/75.  
 Saipan, Puerto Rico, Guam, Virgin Island, and American Samoa—No authority or program submitted.

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#### MODEL COOPERATIVE AGREEMENT

The draft model cooperative agreement was sent to all States and Regional Directors on August 5, 1975, for their comments. We requested that comments be sent by November 1.

We plan to analyze these comments and place a high priority in redrafting a final model cooperative agreement as quickly as possible.

(5) How many "recovery plans" have been completed for listed species? One recovery plan (on the California condor) was approved April 9, 1975. Hawaiian waterbird preliminary draft plan was completed August 5, 1975, and approved. A plan on the Indiana bat was submitted but returned for additional work on July 10, 1975. Forty-four more plans are currently being developed and scheduled for completion by the end of FY 1976, as per the attached.

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<sup>1</sup> Indicates State has qualified.

<sup>2</sup> Indicates authorities or program under review.

<sup>3</sup> Indicates authorities and/or program lacking.

## FISCAL YEAR 1975-76 RECOVERY TEAM AND PLAN SCHEDULE AS OF JUNE 10, 1975

|   | Team nomi-<br>nations due | Team<br>appointed | Plan due                  |
|---|---------------------------|-------------------|---------------------------|
| <b>Region 1:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| California condor .....   | Received                  | Apr. 10, 1975     | Received                  |
| Hawaiian crow .....   | do                        | Apr. 16, 1975     | Jan. 1, 1976              |
| Hawaii (big island) rain forest birds .....                       | do                        | do                | Do                        |
| L.-f. clapper rail .....  | do                        | Apr. 10, 1975     | Dec. 1, 1975 <sup>1</sup> |
| Col. white-tailed deer .....                                      | do                        | Apr. 11, 1975     | Do                        |
| Santa Cruz salamander .....                                       | do                        | do                | June 1, 1976              |
| Laysan duck .....   | do                        | do                | Dec. 1, 1975              |
| Palila .....  | do                        | do                | Jan. 1, 1975              |
| Cui-ul .....  | do                        | do                | Jan. 1, 1976              |
| California least tern .....                                       | do                        | do                | Dec. 1, 1975 <sup>1</sup> |
| San Joaquin kit fox .....   | do                        | Apr. 10, 1975     | June 1, 1976              |
| Warm Springs pupfish .....  | do                        | Apr. 11, 1975     | Jan. 1, 1976              |
| Nene .....  | do                        | do                | Dec. 1, 1975              |
| Kauai Forest birds .....  | do                        | do                | Jan. 1, 1976              |
| Molokai-Mauai Forest birds .....                                  | do                        | do                | May 1, 1976               |
| Hawaiian waterbirds .....   | do                        | do                | Aug. 1, 1975              |
| Fiscal year 1976 advice:  |                           |                   |                           |
| San Francisco Bay species .....                                   | July 1, 1975              |                   | Nov. 1, 1975 <sup>1</sup> |
| Blunt-nosed leopard lizard .....                                  | Oct. 20, 1975             |                   | Fiscal year 1977          |
| California brown pelican <sup>2</sup> .....                       | do                        |                   | Do                        |
| American peregrine falcon (Pacific population) <sup>2</sup> ..... | do                        |                   | Do                        |
| Devil's Hole pupfish .....  | do                        |                   | Do                        |
| Pahrump killifish .....   | Jan. 1, 1976              |                   | Do                        |
| Unarmored threespine stickleback .....                            | do                        |                   | Do                        |
| <b>Region 2:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Red wolf .....  | Received                  | Jan. 9, 1975      | Mar. 1, 1975              |
| Whooping crane .....  | Apr. 1, 1975              |                   | May 1, 1976               |
| Colorado squawfish .....  | Received                  |                   | Do                        |
| Woundfin .....  | do                        |                   | Do                        |
| Sonoran pronghorn .....   | do                        | June 10, 1975     | Do                        |
| Mexican duck .....  | do                        | Apr. 11, 1975     | Oct. 1, 1976              |
| Apache trout .....  | do                        | Apr. 22, 1975     | Fiscal year 1977          |
| Gila trout .....  | do                        | do                | Oct. 1, 1976              |
| Yuma clapper rail .....   | do                        | Apr. 11, 1975     | Do                        |
| Masked bobwhite .....   | do                        | Apr. 18, 1975     | Do                        |
| <b>Region 3:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Eastern timber wolf .....   | do                        | Apr. 11, 1975     | Nov. 1, 1975              |
| Kirtland's warbler .....  | do                        | Jan. 20, 1975     | Feb. 1, 1976              |
| Blue pike .....   | do                        | Dec. 18, 1974     | Jan. 1, 1976              |
| Indiana bat .....   | do                        | Dec. 23, 1974     | Aug. 1, 1975              |
| <b>Region 4:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Mississippi sandhill crane .....                                  | do                        | do                | June 1, 1975 <sup>1</sup> |
| Everglade kite .....  | do                        | May 12, 1975      | Do                        |
| American alligator .....  | do                        | Dec. 23, 1975     | Sept. 1, 1975             |
| Puerto Rican parrot .....   |                           |                   | Aug. 1, 1975              |
| Okaloosa darter .....   |                           |                   | Do                        |
| Red-cockaded woodpecker .....                                     | do                        | June 9, 1975      | June 1, 1976              |
| Dusky seaside sparrow .....                                       | do                        | Jan. 14, 1975     | Sept. 1, 1975             |
| Eastern brown pelican <sup>2</sup> .....                          |                           |                   | Oct. 1, 1976              |
| Fiscal year 1976 advice:  |                           |                   |                           |
| Watercress darter .....   | July 1, 1975              |                   | Nov. 1, 1975 <sup>1</sup> |
| Puerto Rican plain pigeon .....                                   | Oct. 20, 1975             |                   | Fiscal year 1977          |
| Florida panther .....   | do                        |                   | Do                        |
| Florida manatee .....   | Jan. 1, 1976              |                   | Do                        |
| <b>Region 5:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Delmarva fox squirrel .....                                       | Received                  | Dec. 9, 1974      | Sept. 1, 1975             |
| Eastern peregrine falcon population <sup>2</sup> .....            | do                        | Apr. 11, 1975     | July 1, 1976              |
| Maryland darter .....   | do                        | Apr. 7, 1975      | Nov. 1, 1975              |
| <b>Region 6:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Rocky Mountain peregrine falcon population <sup>2</sup> .....     | do                        | Apr. 11, 1975     | July 1, 1976              |
| Rocky Mountain wolf .....   | do                        | do                | Do                        |
| Black-footed ferret .....   | do                        | do                | Jan. 1, 1976              |
| Greenback cutthroat trout .....                                   | do                        | do                | Do                        |
| <b>Alaska:</b>  |                           |                   |                           |
| Fiscal year 1975 advice:  |                           |                   |                           |
| Aleutian Canada goose .....                                       | do                        | May 9, 1975       | June 1, 1975              |
| Arctic peregrine falcon .....                                     | do                        |                   | Jan. 1, 1977              |



## Number of teams Number of species

|                      |    | Team nomi-<br>nations due | Team<br>appointed | Plan due |
|----------------------|----|---------------------------|-------------------|----------|
| <b>Summary:</b>      |    |                           |                   |          |
| Fiscal year:         |    |                           |                   |          |
| 1975.....            | 47 | 58                        |                   |          |
| 1976 (proposed)..... | 11 | 10                        |                   |          |
| Subtotal.....        | 58 | 68                        |                   |          |
|                      |    | 43                        |                   |          |
| Total.....           |    | 71                        |                   |          |

<sup>1</sup> Plan urgently needed for land acquisition procedures.

<sup>2</sup> Plan urgently needed for species management.

<sup>3</sup> Species as listed in Federal Register. Sometimes includes more than 1 subspecies or population handled by 2 or more teams.

<sup>4</sup> Taken by States (team appointment process nearly complete).

Note.—Due dates for team nominations overdue in some cases for lack of written confirmations from some States and agencies on availability of their people.

## SPECIES FOR RECOVERY TEAMS, FISCAL YEAR 1975-76

| Species as listed in Federal Register  | Name of team handling                                  | Lead<br>region | Support<br>regions |
|--|--|----------------|--------------------|
| <b>Fishes:</b>                         |  |                |                    |
| Cui-ui.....                            | Same as species.....                                   | 1              | -----              |
| Darter, Maryland.....                  | do.....  | 5              | -----              |
| Darter, okaloosa.....                  | do.....  | 4              | -----              |
| Darter, watercress.....                | do.....  | 4              | -----              |
| Killifish, pahump.....                 | do.....  | 1              | -----              |
| Pike, blue.....                        | do.....  | 3              | -----              |
| Pupfish, devil's hole.....             | do.....  | 1              | -----              |
| Pupfish, warm springs.....             | do.....  | 1              | -----              |
| Squawfish, Colorado River.....         | do.....  | 2              | 6                  |
| Stickleback, unarmored threespine..... | do.....  | 1              | -----              |
| Trout, Arizona.....                    | do.....  | 2              | -----              |
| Trout, gila.....                       | do.....  | 2              | -----              |
| Trout, greenback cutthroat.....        | do.....  | 6              | -----              |
| Woundfin.....                          | do.....  | 2              | 6                  |
| <b>Herps:</b>                          |  |                |                    |
| Alligator, American.....               | do.....  | 4              | 2                  |
| Lizard, blunt-nosed leopard.....       | do.....  | 1              | -----              |
| Salamander, Santa Cruz.....            | do.....  | 1              | -----              |
| Toad, Houston.....                     | State to handle.....                                   | 2              | -----              |
| <b>Birds:</b>                          |  |                |                    |
| Akepa, Hawaii.....                     | Big Island Forest birds.....                           | 1              | -----              |
| Akepa, Maui.....                       | Maui-Molokai Forest birds.....                         | 1              | -----              |
| Akialoa, Kauai.....                    | Kauai Forest birds.....                                | 1              | -----              |
| Akiapolaau.....                        | Big Island Forest birds.....                           | 1              | -----              |
| Bobwhite, masked.....                  | Same as species.....                                   | 1              | -----              |
| Condor, California.....                | do.....  | 1              | -----              |
| Coot, Hawaiian.....                    | Hawaiian waterbirds.....                               | 1              | -----              |
| Crane, Mississippi sandhill.....       | Same as species.....                                   | 4              | -----              |
| Crane, whooping.....                   | do.....  | 2              | 6                  |
| Crow, Hawaiian.....                    | do.....  | 1              | -----              |
| Creeper, Molokai.....                  | Maui-Molokai Forest Birds.....                         | 1              | -----              |
| Duck, Laysan.....                      | Same as species.....                                   | 1              | -----              |
| Duck, Mexican.....                     | do.....  | 2              | -----              |
| Falcon, American peregrine.....        | 3 teams as follows:                                    |                |                    |
|  | American peregrine eastern population.....             | 5              | 3, 4               |
|  | American peregrine, Rocky Mountain population.....     | 6              | 2                  |
|  | American peregrine, Pacific population.....            | 1              | -----              |
|  | Same as species.....                                   | (1)            | (?)                |
| Gallinule, Hawaiian.....               | Hawaiian Waterbirds.....                               | 1              | -----              |
| Goose, Aleutian Canada.....            | Same as species.....                                   | (1)            | 1                  |
| Goose, Hawaiian (nene).....            | do.....  | 4              | -----              |
| Kite, Florida Everglade.....           | do.....  | 4              | -----              |
| Honeycreeper, crested.....             | Maui-Molokai Forest birds.....                         | 1              | -----              |
| Nukupuu, Kauai and Maui.....           | 2 teams as follows:                                    |                |                    |
|  | Kauai Forest birds for Kauai subspecies.....           | 1              | -----              |
|  | Maui-Molokai Forest birds for Maui subspecies.....     | 1              | -----              |
| Oo, Kauai.....                         | Kauai Forest birds.....                                | 1              | -----              |
| Ou.....                                | 2 teams as follows:                                    |                |                    |
|  | Kauai Forest birds for Kauai population.....           | 1              | -----              |
|  | Big Island Forest birds for Big Island population..... | 1              | -----              |

## SPECIES FOR RECOVERY TEAMS, FISCAL YEAR 1975-76—Continued

| Species as listed in Federal Register     | Name of team handling                     | Lead region | Support regions |
|---|---|-------------|-----------------|
| Pallid .....                              | Same as species .....                     | 1           | -----           |
| Parrot, Puerto Rican .....                | do. ....                                  | 4           | -----           |
| Parrotbill, Maui .....                    | Maui-Molokai Forest birds .....           | 1           | -----           |
| Pelican, brown .....                      | 2 teams for 2 subspecies as follows:      |             |                 |
|   | California brown pelican .....            | 1           | -----           |
|   | Eastern brown pelican .....               | 4           | 2               |
| Pigeon, Puerto Rican plain .....          | Same as species .....                     | 4           | -----           |
| Prairie chicken, Attwater's greater ..... | State to handle .....                     | 2           | -----           |
| Rail, California clapper .....            | San Francisco Bay species .....           | 1           | -----           |
| Rail, light-footed .....                  | Same as species .....                     | 1           | -----           |
| Rail, Yuma clapper .....                  | do. ....                                  | 2           | 1               |
| Sparrow, Dusky seaside .....              | do. ....                                  | 4           | -----           |
| Stilt, Hawaiian .....                     | Hawaiian waterbirds .....                 | 1           | -----           |
| Tern, California least .....              | Same as species .....                     | 1           | -----           |
| Thrush, large Kauai .....                 | Kauai Forest birds .....                  | 1           | -----           |
| Thrush, Molokai .....                     | Maui-Molokai Forest birds .....           | 1           | -----           |
| Thrush, small Kauai .....                 | Kauai Forest birds .....                  | 1           | -----           |
| Warbler, Kirtland's .....                 | Same as species .....                     | 3           | -----           |
| Woodpecker, red-cockaded .....            | Same as species (2 subspecies here) ..... | 4           | 2, 5            |
| <b>Mammals:</b>                           |   |             |                 |
| Bat, Indiana .....                        | Same as species .....                     | 3           | 4, 5, 6         |
| Deer, Columbian white-tailed .....        | do. ....                                  | 1           | -----           |
| Ferret, black-footed .....                | do. ....                                  | 6           | -----           |
| Fox, San Joaquin kit .....                | do. ....                                  | 1           | -----           |
| Manatee, Florida .....                    | do. ....                                  | 4           | -----           |
| Mouse, salt marsh harvest .....           | San Francisco Bay species .....           | 1           | -----           |
| Panther, Florida .....                    | Same as species .....                     | 4           | -----           |
| Prairie dog, Utah .....                   | State to handle .....                     | 2           | -----           |
| Pronghorn, sonoran .....                  | Same as species .....                     | 2           | -----           |
| Squirrel, Delmarva fox .....              | do. ....                                  | 5           | -----           |
| Wolf, eastern timber .....                | do. ....                                  | 3           | -----           |
| Wolf, northern Rocky Mountain .....       | do. ....                                  | 6           | 1               |
| Wolf, red .....                           | do. ....                                  | 2           | 4               |

NOTE.—Total 71 species as listed by Federal Register.

<sup>1</sup> Alaska.

<sup>2</sup> All.

(6) How many field personnel work exclusively for the Service on endangered species? Thirteen Service field personnel spend 85 to 95 percent of their time on listed species. No Service employee works exclusively on endangered species. Many who are assigned to work primarily on endangered species also benefit other species including some that are being considered for listing. Law enforcement and refuges field personnel carry on operations that benefit both endangered and nonendangered species. Some refuges are managed primarily for endangered species but have spin-off benefits to other species.

7. How many permits for export of endangered species have been granted since December 28, 1973?

Endangered Species Export Permits (January 1, 1974—September 22, 1975); Issued, 7; Denied, 1; and Abandoned, 1.

8. How many licenses for wildlife importers/exporters have been granted since December 28, 1973?

None. On March 5, 1974, notice was published in the Federal Register (39 FR 8357) which notified all persons engaged in business as an importer or exporter of fish or wildlife that they have permission under the Act to conduct their business until such time as regulations are promulgated establishing a system for obtaining such permission on a more permanent basis.

Regulations to provide for a system of licenses under section 9(d) of the Endangered Species Act of 1973 are being drafted and should be published as proposed rulemaking within the foreseeable future.

(9) How many personnel work exclusively on permits and licensing for endangered species?

No personnel work exclusively on permits and licensing for endangered species. The Fish and Wildlife Service is charged with enforcement of a number of laws allowing exceptions by permit. The Endangered Species Act is one of these laws. Our system of permits is designed to deal with all these permits and is administered by seven people.

(10) How many captive self-sustaining populations have been designated since December 28, 1973?

No captive self-sustaining populations have been designated. The mechanism setting up the procedure was published with the alligator regulations in the Federal Regulations on September 26, 1975. Now it remains to receive recommendations on populations to be so designated by the same procedure set out in Section 4.

(11) On what dates were the Scientific and Management Authority designated under the Endangered Species Convention?

The Executive Order creating the Scientific and Management Authorities was drafted in coordination with the five agencies involved. It was transmitted to OMB on September 16, 1975, and is now being reviewed by OMB and other agencies prior to being submitted to the White House.

12. How many prosecutions for taking of endangered species have been brought since December 28, 1973?

13. How many have resulted in convictions?

The Fish and Wildlife Service does not maintain statistical records in the form requested. Statistics are only maintained on the total number of endangered species investigations and the resulting disposition. Individual case files would have to be reviewed and analyzed in order to extract the number of individuals that were charged with a taking violation.

Moreover, in cases involving the taking of an endangered species it is often impossible or difficult to prove who actually did the taking, however, charges can be brought for the possession, transportation, sale, etc., of illegally taken species even though it is impossible to prove who did the illegal taking. Therefore, many cases involving illegal taking frequently do not actually have a specific count charging such taking. Of course, where the taker can be identified he would be charged and such case would usually involve additional charges for the possession and transportation of such species.

During fiscal year 1975, 63 criminal convictions were obtained under the Endangered Species laws (our statistical records do not distinguish between 1969 and 1973 Acts. A search of case files could be made.) In addition, 42 cases under the 1973 Act have been closed by assessment of a civil penalty.

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[The prepared statements of Messrs. Bavin and Schreiner follow:]

PREPARED STATEMENT OF CLARK R. BAVIN, CHIEF, DIVISION OF LAW ENFORCEMENT, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

I would like first to discuss the role of law enforcement in the conservation of endangered species, and describe our basic approach to enforcement. Then I will describe the Act's impact on new categories of persons and the associated problems, along with our solutions. Finally, I will outline the specific enforcement activity undertaken by our Division.

In wildlife conservation, law enforcement is concerned with management of people. It focuses on the control of human activity in relationship to wildlife. Through promulgation of regulations, issuance or denial of permits, investigation of alleged violations, and prosecution of offenders we delineate and implement statutory controls over the activities of people.

Our basic law enforcement goal is obtaining widespread voluntary compliance with the statutes and regulations we administer. This compliance is obtained generally in two ways: either by removing the desire or incentive to engage in the prohibited activity, or by removing the opportunity to engage in the prohibited activity. Most enforcement activity relates to the first of these methods, that is, removing the desire or incentive to engage in the prohibited activity. This is sometimes called preventive enforcement. After all, it's better to keep the endangered animal from being killed than apprehend the violator for the illegal killing. Preventing violations is accomplished in several ways. One is by disseminating information to inform people exactly what the law is and the need for compliance. This helps prevent unintentional violations. Another method of preventing violations is to create an impression of omnipresence of enforcement officers. Some people will not violate if they think there is a good probability of getting caught. By maintaining the capability and the apparent willingness to enforce the laws, a deterrent is provided to those who would violate them. The actual investigation and prosecution of cases and the attainment of fines or jail sentences serve to create this deterrent.

Law Enforcement activity under the Endangered Species Act also has to be considered in relationship to other laws enforced by the U.S. Fish and Wildlife Service. This is for two reasons. First, every enforcement officer of the Service, called a Special Agent, is authorized and responsible for enforcing all the laws administered by the Service. Therefore, it is impossible for us to say that a particular Agent is an "endangered species" agent, or a "marine mammal" agent, or a "migratory bird" agent. In addition, there is considerable overlapping protection provided by some statutes. For example, several marine mammals are also endangered species and are therefore protected by both statutes. In addition, many endangered species are also migratory birds, and therefore also protected by the Migratory Bird Treaty Act and, in the case of eagle, by the Bald Eagle Protection Act. In the case of fish, there is additional protection provided by the Black Bass Act. Moreover, the Lacey Act (18 USC 43) provides additional protection to wildlife moving in interstate or foreign commerce if certain State or Federal laws were violated.

Now having in mind the multitude of ways in which the 1973 Act controls the activities of "persons" which, if you recall, extends far beyond the traditional meaning of individuals and organizations, I would next like to discuss the enforcement impact on those persons of the prohibitions in the Act and the reaction of our agency to those impacts.

The Act was signed into law on December 28, 1973, and became effective immediately. There was no delay period for implementation as there had been for the Endangered Species Conservation Act of 1969. On January 9, 1974, we published regulations to implement the new Act. These regulations were simply a carryover of the regulations which had been in effect under the previous Act. At that time, lacking any experience in the potential problems and needs for interpretation of the new Act, these regulations were sufficient. It wasn't long, however, before the expanded prohibitions and the coverage of many new "persons" brought several significant problems to our attention.

An initial problem for everyone was the rumors, and misunderstandings and the misinformation which were circulated in regard to the new Act. The Act was complex and broadreaching, and many persons, not understanding the provisions of the Act, assumed that it either applied or did not apply to them. This led to an intensive period of communications, by telephone and letter, posing innumerable problems and questions.

Out of this period several significant problems arose. First, it became apparent that the Act in fact prohibited much research and conservation activity presently being carried on by State conservation agencies and Federal agencies, including our own agency. There was no exception in the law for taking for scientific research without a permit, and Federal and State agencies were included within the definition of "persons" who were subject to the prohibitions. This meant that permits were required for every activity which involved the taking of an endangered species. This was also complicated by the fact that the definition of taking included the word "harass" which was not interpreted any further by the statute. Many researchers were afraid that even casual observation of wildlife could amount to "harassment".

Another problem that came to light was in the transfers of endangered wildlife between zoos. Some transfers were display loans, some transfers were breeding loans, and some transfers were actual sale transactions. In addition, there was legislative history indicating that public zoos were to be treated differently than private or commercial zoos. (See p. 27, Conference Report, H. Reps. No. 93-740, 1st Sess., Dec. 19, 1973; in relation to application of the "grandfather clause". The zoos found themselves faced with an apparent block to their normal business of transferring animals, a permit requirement which they did not understand very well, and a requirement of the statute that every permit application be published in the Federal Register and subject to public comment for 30 days.

Third, it came to our attention, shortly after the Act came into effect, that many circuses and other traveling exhibitions contained animals which were endangered species. The transportation of these animals across State lines or in or out of the country, was an apparent violation of the Act.

Finally, there were a number of propagators of wildlife, which included endangered species such as tigers, leopards, jaguars, wolves, and pheasants, who now found themselves unable to sell the wildlife which they propagated in interstate or foreign commerce, absent a permit.

These problems, and the normal process of basic interpretation of a new law, which involved, for example, explanations of the application of the "grand-

father clause", provided much of our experience during the first year of the implementation of the statute.

My office's responsibility in relation to these problems was primarily to determine whether or not the desired activity would be in violation of the Act, and if it was in violation of the Act whether a permit was available for that activity. At the same time, the entire agency was involved in the examination of the application of the law to these various problem areas to determine whether or not it was desirable, from the policy point of view, to apply the law to those areas or to find solutions by policy, by regulation and/or by new legislation.

One of the initial law enforcement activities in relation to these problems and the implementation of the Act was the issuance of permits. Here we were faced with several factors which became problems in themselves in regard to the implementation of permits. First, there was a definite increase in the activities related to the permit areas. For instance, there were a great many more telephone calls, written correspondence, and permit applications which had to be dealt with. Many of these required analysis and interpretation of the statute especially in relationship to the problem areas which I have already outlined. This in itself was an extremely time consuming activity. Also, as I have explained above, the fact that the Act applied these prohibitions to new "persons" was another factor. For instance, a permit was necessary to authorize the continuation of our own Agency's research program in regard to endangered species. Because of the mission of the Agency in relation to endangered species, the research program was large and complex. Therefore, the issuance of permits to carry on these activities was not a simple matter. It also happened, completely coincidentally, that prior to the passage of the Endangered Species Act of 1973, we had totally revised our basic regulations for the application and issuance of permits. This added a further factor of confusion for many permit applicants who had not yet become used to dealing with the new permit requirements. Finally, there was the very basic factor that not being able to anticipate the problems or the amount of permit activity, we were not organized or staffed to handle the increased permit workload in the most efficient manner. In the past year and a half, through dissemination of information, through reorganization and increase of staff, through new forms and procedures, through greater familiarity with permit requirements by permit applicants, and through a number of interim policy solutions to certain specific problems, we have essentially solved the early problems of time delay in the issuance of permits.

In addition to the interpretations of the Act in relation to the availability of permits, and the issuance of permits themselves, we handled some of these problems by finding interim policy solutions and by developing new regulations. For example, our new regulations which were just published on Friday, September 26, define the phrase "commercial activity" to mean essentially the actual transfer of wildlife from one person to another in pursuit of gain or profit. This means that the carriage of animals in interstate commerce as part of the movement of a circus, the purpose of which is not to sell the animals themselves but to exhibit them, is no longer considered a "commercial activity". Since they are not considered commercial activities anymore, these movements in interstate commerce do not violate the statute. The statute only prohibits receipt, delivery, transportation, etc., in interstate commerce in the course of a commercial activity. It should be noted however, that this interpretation has no effect when the activity involves importation or exportation, since those actions are prohibited regardless of involvement of commercial activity.

Another problem, which had been solved by interim policy was in relationship to breeding loans by zoos. It came to our attention that many zoos were in the practice of loaning breeding animals and obtaining a portion of the progeny in return for having loaned the animal. Although it could be argued that this in fact was a barter transaction, and therefore prohibited by the Act, we have established a policy that such breeding loans between non-profit institutions are not "commercial activities", and therefore are not prohibited by the Act.

We have also resolved much of the question of transactions with wildlife bred in captivity by establishing the concept of captive self-sustaining populations in the new regulations I referred to. These regulations contain a section which states that a captive population of an otherwise endangered species of wildlife could be considered to be threatened wildlife population if it is demonstrated that that population is self-sustaining in captivity. The new

regulations set out the criteria for making the determination necessary to list those captive populations as threatened species. Once listed, which requires a separate rulemaking, the captive animals may be treated under the threatened species rules established by the new regulations. There is a special permit available under these regulations for transactions involving captive self-sustaining populations. Thus, once a given population of wildlife is nominated for such treatment, passes the test set out in the new regulations, and is listed by regulation as a captive, self-sustaining population, permits are available for transactions with such wildlife on a much more liberal basis than other endangered or threatened species.

We have also evolved a solution to the problem of research and conservation activities by State and Federal agencies. This solution is likewise reflected in the new regulations. Under these regulations certain State and Federal officers or agents are authorized to "take" endangered wildlife for the purpose of aiding sick, injured or orphaned animals, for the salvage of a dead specimen which may be useful for scientific study or for the disposal of a dead specimen. Such persons may also take action to remove endangered wildlife which constitutes a threat to human safety. There are appropriate restrictions in the regulations to assure that these authorities are not abused. In addition, where threatened wildlife is involved, there is an additional authorization for States which have cooperative agreements in effect to take such wildlife without a permit in the course of scientific research or conservation activities. Since this authorization is only effective for States with cooperative agreements, the cooperative agreements themselves will contain the controls necessary to assure that these activities are proper.

As you can see, much of our enforcement activity, especially in the initial period of the implementation of this new statute, was involved with the basic dissemination of information and the interpretation and application of permit provisions. This initial period of experience with the new law brought out those problems which necessitated solution by new regulations. Over this year and a half, since the effective date of the Act, these problems have come to light and we have evolved what we consider appropriate solutions to these problems. Most of these solutions are incorporated in the regulations which were proposed in July and which have been published in final form this last Friday.

During this 21 month period of interpreting the various additional prohibitions we have maintained an active enforcement program. The 8 ports of entry that were designated for the importation of fish and wildlife under the Endangered Species Conservation Act of 1969 carried over with the new statute as did the designated Mexican and Canadian border ports. Our Special Agents assigned to those metropolitan areas continue to monitor imports of fish and wildlife in cooperation with the U.S. Customs Service. In addition, we have Special Agents strategically located throughout the continental United States, Alaska, Hawaii, and Puerto Rico to conduct investigations of violations of the Endangered Species Act of 1973.

There is no effective system in this country to monitor exports, and since this is a new prohibition under this Act, we have been attempting to design an appropriate system. To more effectively utilize our resources, we inaugurated a system of "wildlife inspectors" at the Port of New York this past summer. These inspectors are not law enforcement officers in the normal sense, but work closely with U.S. Customs inspectors to properly identify wildlife imports and monitor the associated paperwork. If apparent violations are detected the case is assigned to a Special Agent. This system has proved extremely effective so far and is more economical because we do not need to provide the full gamut of law enforcement training, nor be subject to the other expenses associated with a Special Agent.

Since the new statute imposed a whole host of new prohibitions relating to endangered species, the Service embarked on a major public education program in order to inform the public and gain as much voluntary compliance as possible. The campaign was kicked off with a major press conference hosted by then Secretary of the Interior Morton. Six television public service announcements were produced alerting viewers to the problem and urging them to write in for a special booklet entitled "Facts About Federal Wildlife Laws." Three of these spots, featuring actor Lorne Greene, were mailed to 500 TV stations throughout the country last March. Subsequently, they were accepted by all 3 networks for broadcast in conjunction with prime time network programming. To date, we estimate a minimum of 75 percent of the stations receiving the spots have put them on the air for an average of 13 weeks. Based

on this, we estimate the three spots released so far have received one million dollars worth of free air time and have been seen by a minimum of 50 million Americans. The three additional spots, plus 3 radio messages presently in production, will be released in 1976 as part of our continuing campaign to educate the public about Federal wildlife restrictions. The public has responded and during the last six months 70,000 of the booklets have been mailed to viewers. If this pace continues we estimate that 185,000 booklets will have been distributed by this time next year.

In addition, Service officials have appeared on TV and radio programs throughout the country to explain Federal restrictions on wildlife and display a variety of forfeited wildlife items. Fact sheets were prepared to describe in layman language the various prohibitions generally and how they affected the special groups such as zoos, taxidermists, etc. We have assisted newspapers and magazines so they can carry our message to an additional segment of the public. I have attached to my statement a copy of a representative article appearing in a major airline in-flight magazine for insertion in the record. In addition, in cooperation with the National Marine Fisheries Service, we produced a poster display that has been placed at a number of airports throughout the country.

When any new law is implemented we not only have to educate the public, but we must also train our own enforcement officers as well as those of co-operating agencies. Therefore, we conducted a training program for Special Agents including administrative guidelines and special conferences. We also conducted training sessions for the U.S. Customs Service and the Department of Agriculture as well as a number of State conservation agencies.

We have continued to vigorously enforce the import restrictions since these have been in effect since 1970. As to the new prohibitions under the Endangered Species Act, our priority has been to focus on commercial activities because we believe these have the single largest impact on the resource and also that commercial operators are, or should be, aware of the new requirements. Among animal deals and those involved in the commercial transportation and utilization of wildlife products, the word has spread quite rapidly that there is a new Endangered Species Act.

To give you some idea of our investigative workload I would like to cite the following statistics. During Fiscal Year 1975 we handled 1,343 investigative matters under the Endangered Species classification. Of those we closed 776 and 567 were still pending on July 1, 1975. During this period criminal prosecutions resulted in convictions of 63 individuals with the courts imposing total fines of \$18,585 and 20 months of jail sentences, with 19 months suspended. While most jail sentences were suspended, the courts did require a total of 9½ years probation. In addition, 155 civil actions were disposed of during the 1975 fiscal year with total penalties of \$7,750 collected. We also obtained forfeitures of endangered species items with an assessed value of \$88,073.

The Committee should recognize that our investigative workload described above does not separate cases under the 1969 and 1973 Acts. Also, a case may involve one individual or it may involve a whole series of individuals throughout the United States where they have operated.

To give you an idea of some of the kinds of activities we have been involved in I have supplied for the record sketches of three significant cases. These cases illustrate the methods and results of our operations.

In conclusion, the enforcement portion of the Endangered Species Act means applying new restrictions on people. We have had some problems implementing these restrictions, however, have found solutions during this initial implementation phase. Notwithstanding our efforts at educating the public, some people still violate the law. We have, therefore, conducted a large number of investigations and obtained some significant penalties including one jail sentence. We hope our entire activity will bring about voluntary compliance with the new statute so that endangered and threatened species will not be killed.

#### U.S. FISH AND WILDLIFE SERVICE, DIVISION OF LAW ENFORCEMENT

##### *Three Significant Endangered Species Cases*

In the summer of 1974, Special Agents of the U.S. Fish and Wildlife Service conducted a lengthy investigation concerning the shipment of illegally taken alligator hides from Louisiana to New Jersey. On September 17, 1974, six

persons were arrested by our Special Agents and more than 500 American alligator hides from a commercial tanning company in Newark, New Jersey. These hides were valued at over 50,000. Indictments have been issued and the case is currently awaiting trial in U.S. District Court.

Following an intensive undercover investigation in August 1974, our Special Agents arrested three men for transportation of American alligator hides in interstate commerce at New Orleans. They seized 262 alligator hides and subsequently all three defendants were found guilty in Federal Court and each sentenced to one year in jail which was suspended. In addition, they were fined \$5,000 and placed on three years probation.

In October of 1974, as a result of an undercover investigation by Special Agents, an individual was arrested in Kentucky for the commercial interstate transportation of an endangered leopard. At a jury trial in Federal Court in July 1975, the subject was found guilty of violating both the Lacey Act and the Endangered Species Act. The subject was sentenced to two years in jail with all but four months suspended, and placed on five years active probation.

#### PORTFOLIO

##### YOU CAN'T GO HOME AGAIN

Not without a fine, at least, if your straw bag of tourist goodies is overflowing with such mementos as stuffed armadillos, ocelot hats, alligator belts, or tortoise shell jewelry.

In recent years, the increased demand for products made from wildlife has put greater pressure on some struggling species. To meet this growing threat to the world's wildlife, the U.S. government has instituted new import controls designed to safeguard wild animals.

In general, the bulk of "prohibited" wildlife products sold abroad falls into five categories:

"Tortoise shell" jewelry, and other products made from the shell of the hawksbill sea turtle.

Rugs, skins, clothing and hunting trophies made from spotted cats such as the leopard, jaguar, margay, cheetah, ocelot, or tiger.

"Scrimshawed" curios and figurines (netsuke) carved from whale teeth (ivory).

Luggage, shoes, purses, wallets, belts and other leather goods made from alligators, some species of crocodiles, or sea turtles.

Products or curios made from wild bird feathers, or mounted specimens of certain birds.

The old argument that "it was already dead" won't cut any ice. Government officials reason that whenever you buy such an item, the demand increases—thereby putting more pressure on the species it's made from.

To avoid problems, check the import regulations before you go. Write to the U.S. Fish and Wildlife Service, Department of the Interior, Washington, DC 20240.

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#### ADDITION TO ORAL STATEMENT OF KEITH M. SCHREINER, ASSOCIATE DIRECTOR, FEDERAL ASSISTANCE, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

The Fish and Wildlife Service has participated in foreign programs concerned with the conservation of fish and wildlife in 21 foreign countries. The programs included training foreign nationals in fish and wildlife management, ecosystems preservation, law enforcement, professional consultation and providing specialized equipment. Some of this work was accomplished prior to December 28, 1973, but most has occurred since then. In addition we have assisted 14 other countries with fish and wildlife problems that did not involve endangered species.

We have developed programs totaling \$600,000 that we hope to fund with excess foreign currencies in fiscal year 1976. These programs involve research and surveys designed to pinpoint problems faced by endangered and threatened species in Egypt, India and Pakistan. These projects are currently being reviewed by the Office of Management and Budget.

Finally, we have developed a draft Executive order which will designate the scientific and management authorities needed to implement the Convention



on International Trade in Endangered Species of Wild Fauna and Flora. This draft Executive order is currently being reviewed by the Office of Management and Budget. Too, we are developing the internal organization needed to fully implement this convention in anticipation of the funds which we hope Congress will provide us with this year. Only two of the 18 countries that have ratified the Convention are ready to implement it—Canada and Switzerland.

While attempting to implement the many new features of the Endangered Species Act of 1973, we have not neglected ongoing activities, most of which were initiated or conceived prior to December 28, 1973. First and foremost among these accomplishments has been the appointment of 45 endangered species recovery teams composed of Federal, State, and private professionals and laymen who have a responsibility for or a particular interest in an endangered species at the grassroots level. These teams are preparing or have prepared recovery plans for the species to which they are assigned.

A recovery plan is an action plan that outlines all of the actions needed to effect the recovery of a species. These actions are then placed in chronological order, given a cost estimate and assigned to an agency or an individual. The team will keep the plan viable and oversee its accomplishments until it is completed—that is, until the species has recovered and its future well-being is reasonably assured.

We are extremely pleased with the Federal, State, and private agency acceptance and support of this effort. The recovery team/recovery plan program offers the opportunity for all Federal, State, and private interests to work together in a coordinated manner with a common goal, and to apply all of their resources where they will do the most good.

To date, the Service has acquired with Land and Water Conservation Funds over 40,000 acres of land and water for endangered wildlife at an estimated cost of just under \$13,500,000. In 1976, we plan to acquire an additional 3,685 acres at a cost of about \$8,000,000. Species benefitting from this land acquisition program include the California condor, key deer, American alligator, dusky seaside sparrow, Hawaiian coot, Hawaiian stilt, Hawaiian gallinule and Hawaiian duck, Delmarva Peninsula fox squirrel, Columbia white-tailed deer, Attwater's greater prairie chicken, and the Southern bald eagle.

Approximately 44 endangered species are found on 139 areas administered under the National Wildlife Refuge System. A few endangered species are found almost exclusively on Refuge lands. A substantial part of the total resources and efforts of several refuges are devoted to endangered species. These include the whooping cranes at Aransas National Wildlife Refuge in Texas, the key deer on the National Key Deer Refuge in Florida, the Sonoran pronghorn on the Cabeza Prieta Game Range in Arizona, the Delmarva Peninsula fox squirrel at Blackwater National Wildlife Refuge in Maryland, the Laysan duck, Laysan finch, Nihoa miller bird and the Nihoa finch on the Hawaiian Islands Refuge, and the Florida Everglades kite on the Loxahatchee Refuge on Florida. We are achieving about 60 percent of our endangered species goals on National Wildlife Refuge lands and are vigorously seeking the funds to raise our accomplishment to the 90 percent achievement level.

Finally, I would like to point out that we are building and training an endangered species staff to assume new responsibilities as quick as we can obtain the funds and the ceilings to do the job. We started in 1971 with 2 biologists and a secretary. In 1972, the number has increased to 6 professionals and 2 secretaries. When the Act was passed, we had 9 professions, 4 secretaries, and 1 technician. At present, we have 17 full-time professionals, 6 full-time secretaries, and 7 part-time temporary employees. Many of them are new on the job and are taught by the more experienced employees as time permits.

Mr. BREAUX. Our next witness will be Mr. Jack Gehringer.

Jack, I see that you have Mr. Ray Hubley and Herb Blatt with you.

If they will take their position with you at the witness table.

The committee would note, if you would like to summarize your testimony, that would be agreeable with the committee, if that is possible.

**STATEMENT OF JACK GEHRINGER, DEPUTY DIRECTOR, NATIONAL MARINE FISHERIES SERVICE, DEPARTMENT OF COMMERCE, ACCOMPANIED BY RAY HUBLEY, CHIEF, DIVISION OF MARINE MAMMALS AND ENDANGERED SPECIES; HERBERT BLATT, OFFICE OF GENERAL COUNSEL, NOAA**

Mr. GEHRINGER. Thank you, Mr. Chairman.

I am Jack Gehringer, Deputy Director, National Marine Fisheries Service.

I have with me on my left, Ray Hubley, who is Chief of the Division of Marine Mammals and Endangered Species, National Marine Fisheries Service, and on my right, Herbert Blatt, Office of General Counsel from NOAA.

If I may, sir, I would like to read the testimony, because there are some pertinent points I think that have not been brought out.

Mr. BREAUX. Proceed.

Mr. GEHRINGER. It is a pleasure to appear before this subcommittee today to testify on our efforts and accomplishments in implementing the Endangered Species Act of 1973.

In addressing this subject, I will briefly mention the basic responsibilities of the Department of Commerce under the act, relate the program direction we have taken in meeting those responsibilities, describe our accomplishments since we appeared before this subcommittee last November for oversight hearings on the act, and the impact on our plans of recent recommendations of the Conference Committee on Appropriations on our fiscal year 1976 budget request.

The responsibilities of the Department of Commerce under this act have been delegated to the National Marine Fisheries Service. Our basic responsibility is to develop and maintain conservation programs for fish, wildlife, and plant species under the jurisdiction of the Department of Commerce by virtue of reorganization plan No. 4 of 1970 and the memorandum of understanding with the U.S. Fish and Wildlife Service. These include the living resources of the marine environment, including all estuaries and brackish water areas, commercial fisheries, and ocean-related fisheries. We share with the Fish and Wildlife Service responsibility for consulting with other Federal agencies and foreign countries in certain situations. In addition, we are responsible for encouraging States and other interested parties to develop and maintain conservation programs. This basic responsibility necessarily involves administration, law enforcement and research functions.

The National Oceanic and Atmospheric Administration reprogramed \$130,000 in fiscal year 1974 on a one-time basis to initiate an endangered species program. In fiscal year 1975, \$350,000 was reprogramed for research on the status of Atlantic bluefin tuna, and \$30,000 for the administration of the act, both on a one-time basis.

This fiscal year we expect \$400,000 in program funds and nine personnel ceilings. Personnel presently working full time in this program are a program coordinator and a clerk-typist. Other individuals within our Agency assist in implementing the act, including administration, law enforcement, research, and General Counsel staff.

As reported last year, interagency cooperation in meeting our responsibilities has continued under two interagency memoranda of understanding with the U.S. Fish and Wildlife Service, Department of the Interior. One provides for cross-utilization of enforcement authority and capability, and the other clarified jurisdictional responsibility and listing procedures. We have also cooperated with other Federal agencies on overlapping program matters and matters of mutual interest, including Departments of State, Treasury—Customs Service in particular—Agriculture and the Environmental Protection Agency. We provided guidance to all Federal agencies at a meeting held jointly with the Fish and Wildlife Service on May 29, 1975, concerning upcoming activities and responsibilities under the interagency cooperation and critical habitat mandate of section 7 of the act.

Federal-State cooperation continues to be limited to briefings, responses to inquiries, and procedural guidance. As mentioned last year, in conjunction with the Fish and Wildlife Service we held a series of State regional briefings on the overall act, and subsequently provided the States with written guidelines for entering into cooperative agreements under section 6. In early August this year, together with the Fish and Wildlife Service, we sent a model cooperative agreement to the Governors and fish and game directors of all States, Territories, possessions, and the Commonwealth of Puerto Rico, requesting comments on the model.

I would now like to describe briefly some of the accomplishments of our program during the 10-month period since the November oversight hearings.

#### PROGRAM REGULATIONS

On November 27, 1974, we published final regulations governing endangered species covering general provisions, civil procedures, seizure and forfeiture procedures, and permit provisions. The permit regulations included application procedures and issuance criteria for permits for scientific purposes, and enhancement of propagation or survival.

On February 28, 1975, we published proposed regulations on Federal-State cooperation under section 6 of the act. These included criteria for approval of grants in aid to the States. We propose to promulgate these regulations in the near future.

#### ENDANGERED SPECIES PERMITS

Four permits for scientific purposes involving fin, sei, sperm, bowhead, and gray whales have been issued under the act. Collectively, these permits would, among other things, allow observation cruises and aerial surveys, tagging with discovery marks or implantable radio transmitters, collection of samples from dead specimens, and observation of the Alaskan native whale harvest.

We are also processing four additional scientific permit applications involving whales and two permit applications involving short-nose sturgeon.

#### FEDERAL-STATE COOPERATIVE AGREEMENTS

We approved the application of the State of New Jersey for an endangered species Federal-State cooperative agreement. This in-

cluded a review of the State's legal authority, program, and plan for the conservation of resident endangered and threatened species. New Jersey was the first State to qualify with the National Marine Fisheries Service for such an agreement. Proposals from 11 other coastal States are being considered.

#### WHALES—RESEARCH

Our research on whales is conducted as part of the ongoing marine mammal program activities. This research has included the annual migratory gray whale census, a southeastern Alaska humpback whale distribution and abundance study, and monitoring of the Alaskan Native bowhead whale harvest. Most of the assessment of whale stocks was conducted as the U.S. part of the international program on whales.

#### WHALES—INTERNATIONAL WHALING COMMISSION (IWC)

Under terms of the 1946 International Convention for the Regulation of Whaling, member nations are obligated to collect and analyze catch, effort, and biological data. To fulfill the U.S. research responsibilities under the IWC Convention, we have taken a variety of initiatives including participation in a U.S.-U.S.S.R. whale observation and marking cruise carried out earlier this year in the eastern tropical Pacific; participation in the development of the management scheme now adopted by IWC; preparation of stock analysis reports on North Pacific sei whales for the IWC Scientific Committee; analysis of catch and effort data for the IWC; and participation in the London IWC meetings. We have also sent observers to Japanese whaling stations and aboard a Japanese whaling vessel.

#### WHALES—OTHER INTERNATIONAL RESEARCH

Through the U.S.-U.S.S.R. marine mammal project, under the U.S.-U.S.S.R. Environmental Protection Agreement, we have participated with Soviet counterparts in the development of collaborative whale research programs among Government and private sector scientists. Activities include cetacean marking cruises—spring, 1975—airial surveys of bowhead whales in the North Pacific—fall, 1975—and exchange of data, publications, and conservation regulations.

Illegal trafficking in scrimshaw made from whalebone and whale teeth continues to involve significant law enforcement effort. We have attempted to reduce the problem by writing individuals known to have stockpiles and by posting information alerts as to the act's prohibitions in ports of entry and other key locations. Our most recent survey indicates stockpiles of scrimshaw estimated at approximately 25,000 pounds, with an estimated value of up to \$1.3 million. Largest concentrations are in the Northeastern and Northwestern regions of the country. Preact stockpiles of processed sperm whale oil have also caused law enforcement problems. The largest known stockpile is that owned by the General Services Administration. It consists of 23.5 million pounds valued at about one half million dollars. Our position remains that scrimshaw and whale oil lawfully possessed in the United States on the date of enactment of the Endangered Spe-

cies Act should be allowed to move in interstate and foreign commerce, irrespective of whether it was held, at that time, in the course of a commercial activity.

#### ATLANTIC BLUEFIN TUNA

On April 2, 1975, we proposed listing and managing Atlantic bluefin tuna as a threatened species pursuant to the act. The proposed listing was in response to a concern over the apparent decline in stocks and based on the absence of regulatory mechanisms. A public hearing was held on this proposal in Boston on May 16, 1975. However, due to the recently enacted Atlantic Tuna Convention Act of 1975, and the regulations promulgated thereunder, the need to use the Endangered Species Act as the statutory basis for listing Atlantic bluefin tuna as a threatened species in order to regulate does not exist at this time.

#### SEA TURTLES

Under a memorandum of understanding, the Departments of Commerce and the Interior, which presently share jurisdiction for sea turtles, continued an interagency review of the status of green, loggerhead, and Pacific ridley sea turtles. As a result of this review, a joint status report and an environmental assessment were prepared. On May 20, 1975, the listing and protective regulations for these species were formally proposed by the National Marine Fisheries Service and the Fish and Wildlife Service.

This proposed rulemaking raised several controversial issues, and we received 37 comments from the public, as well as comments from a dozen foreign countries. The National Cannery Association requested a public hearing because of the "gravity, complexity, and controversial nature" of the proposed action. The National Marine Fisheries Service has determined that this proposal requires an environmental impact statement. As a result, the National Marine Fisheries Service is preparing an environmental impact statement, and has scheduled a public hearing December 3, 1975, in Washington, D.C. The hearing will address: The proposal to list; the proposed protective regulations; and the draft environmental impact statement.

Our international activities concerning sea turtles have been limited. After proposing to list green loggerhead, and Pacific ridley sea turtles as threatened species, the National Marine Fisheries Service and the Fish and Wildlife Service sent a telegram in early July 1975, through the Department of State, to all diplomatic and consular posts requesting them to advise foreign government agencies of the proposal.

#### PLANTS

We recognize that some marine flora may need protection even though no plants are now listed in the U.S. endangered wildlife lists. As funds become available, approximate research will be initiated. In the interim, we will continue our cooperative efforts with the Fish and Wildlife Service and the Smithsonian Institution.

## CRITICAL HABITAT (SECTION 7)

Together with the Fish and Wildlife Service, we issued a joint public notice on critical habitat in April 1975. This notice announced that critical habitat areas will be designated, as appropriate, for certain animals listed as endangered or threatened species under the act. It also served to inform the public of the concept of critical habitat, and to alert the Federal agencies of their related responsibilities under the act. As I indicated earlier, this subject was discussed at our May 29, 1975, meeting with other Federal agencies on interagency cooperation.

An interagency committee headed up by the Departments of the Interior and Commerce was formed to develop guidelines for use by all Federal agencies in complying with section 7 of the act, in order to avoid actions by such agencies which might: (1) Jeopardize endangered or threatened species or; (2) destroy or modify critical habitat of such species. We anticipate final interagency committee action on these guidelines within the next several months.

## CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED AND THREATENED SPECIES OF WILD FAUNA AND FLORA

In cooperation with the Fish and Wildlife Service we prepared a draft Executive order to designate management authorities and a scientific authority to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which entered into force on July 1, 1975. This draft, with modifications by the Fish and Wildlife Service; was submitted by them to the Office of Management and Budget for interagency review.

We are presently developing interim procedures for implementing the convention.

Unfortunately, these accomplishments represent only a fraction of what needs to be done.

## BUDGET

We determined that a reasonable budget to effectively carry out our responsibilities under the Endangered Species Act in fiscal year 1976 would require \$2 million, and nine full time positions. The President requested this level of funding. The budget requested would have provided \$100,000 and three positions for administration, \$150,000 and six positions for law enforcement, \$750,000 for research, and \$1 million for financial assistance to States in implementing the Endangered Species Act.

Last week the conference committee on appropriations reported out our fiscal year 1976 request for endangered species at a level of \$400,000 with nine positions. The \$1.6 million cut agreed to would remove all moneys requested for research but \$150,000, and all funds requested for financial assistance to States.

## FISCAL YEAR 1976 PROGRAM

I will now describe what I envision our program to involve in fiscal year 1976, assuming it is funded and staffed at the level recommended by the conference committee on appropriations. Promulga-

tion of regulations to provide necessary authority, procedure, and guidance to fully implement the program will continue to be a high priority item. Final Federal-State cooperation regulations will be promulgated by government Federal assistance to States in the near future. Final regulations to list and protect green, loggerhead, and Pacific ridley sea turtles under the act will be required if a final determination is made to list these species as threatened. Processing of permit applications and issuance of permits for listed endangered or threatened species will continue.

Review of Federal-State cooperative agreement applications will continue. I expect that during fiscal year 1976 we may enter into agreements with as many as six of those coastal States that have applied for cooperative agreements. We will also finalize the model for cooperative agreements. However, the absence of any Federal funds for financial assistance this year may discourage many States from entering into Federal-State cooperative agreements.

Once the guidelines for interagency cooperation has been finalized, we will need to review Federal agency projects to insure that they do not jeopardize endangered or threatened species or destroy or modify critical habitat.

Law enforcement capability will be enhanced this year with the additional \$150,000 and six agents, but our responsibilities under the recently implemented Convention on International Trade in Endangered Species of Wild Fauna and Flora will increase demands on this activity.

At the level of appropriation recommended by the conference committee on appropriations, action in the following areas of responsibility will be severely limited and will be determined on changing priorities; research on species presently listed; status reviews and protection resulting from listing convention species not presently on the U.S. endangered wildlife list; status reviews of species for which we have received petitions which present substantial evidence in support of listing; commercial fishing gear research to reduce or eliminate incidental catch of endangered or threatened species, marine flora research and regulations; designation of critical habitat areas; recovery teams; and adequate Federal-State cooperative agreement support.

Except for financial assistance to States under section 6, authorization for appropriations to enable the Department of Commerce to carry out its functions and responsibilities under the Endangered Species Act is provided for under section 15 of the act. That authority expires at the end of fiscal year 1976. The authorization for financial assistance to States under section 6 expires at the end of fiscal year 1977. This Department has submitted to Congress legislation to extend the authorization for appropriation under section 15 (H.R. 9082). A proposal for section 6 extension of appropriation authorization is under review within the administration.

In summary, at last year's oversight hearings we indicated that much more needed to be done, and it would require base funding. The program which can be undertaken with the limited funding recommended by the conference committee on appropriations will be inadequate to meet our responsibilities under the act.

I and those with me will be pleased to answer any questions you may have.

Mr. BREAUX. Thank you very much, Mr. Gehringer.

I have one thing I would like to comment on.

Your testimony indicated originally the Department had planned to make a request, or actually requested a listing of the bluefin tuna as an endangered species.

Because of the tuna agreement, that is no longer necessary?

Mr. GEHRINGER. Yes, sir.

Mr. BREAUX. My question is, what effect would be felt in your Department as far as your responsibility if we were to adopt the 200-mile fishing limit that we had coming out of our committee?

Mr. GEHRINGER. Excuse me. Would you rephrase the question?

Mr. BREAUX. How would that affect your operations, as far as the endangered species program is concerned?

Mr. GEHRINGER. If we moved to the 200-mile jurisdiction?

Mr. BREAUX. Right.

Mr. GEHRINGER. Insofar as the marine mammals, the primary marine animal we would be considering, it would provide an area of management authority we do not presently have. That is the best I can say off the top of my head.

Mr. BREAUX. It would seem to serve as protection to fish located within the 200-mile zone?

Mr. GEHRINGER. It would provide the opportunity for us to have jurisdiction over those fish and wildlife, yes, sir.

Mr. BREAUX. I am not asking you to say you think it is a good idea, because I know some of the problems we have in this area.

Mr. GEHRINGER. I understand.

Mr. BREAUX. It seems to me when we talk about international agreement, that of course the 200-mile limit would provide a great deal of protection for fish that find themselves within the 200-mile zone that are now presently potentially in danger.

Mr. GEHRINGER. With respect to the bluefin tuna, of course, it is a wide ranging species, inside and outside of the 200 miles. We would still feel that international management would be preferable for that species.

Mr. BREAUX. Thank you.

Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

Mr. Gehringer, on page 9, where you discuss marine flora, did the Smithsonian also provide you with lists of endangered and threatened marine flora that sheer numbers is part of the problem?

Mr. GEHRINGER. To the best of my knowledge, and I may be corrected by one of the gentlemen with me, that list concerns a relatively small list of estuarine marsh plants.

Mr. FORSYTHE. It is not of the same complexity?

Mr. GEHRINGER. No.

Mr. FORSYTHE. On page 7 you discuss the problem of existing inventories concerning scrimshaw, sperm whale oil, and so forth.

I believe you propose jointly with Fish and Wildlife in this area that which would permit the sale of these items in either interstate or foreign commerce.

Mr. GEHRINGER. Yes, sir, we agree with that.

Mr. FORSYTHE. You agree with that?

I am not sure if you proposed it. I am looking at a letter where the Department of the Interior proposed it.



Mr. GEHRINGER. We would concur.

Mr. FORSYTHE. You have reviewed this, and you join in this?

Mr. GEHRINGER. The National Marine Fisheries Service has. The Department of Commerce has not been called upon at this time to comment. We in National Marine Fisheries Service agree with this.

Mr. FORSYTHE. You agree that the controls provided for are sufficient to insure that there can be tracking of inventories and so forth are adequate in this area?

Mr. GEHRINGER. Yes.

Mr. FORSYTHE. In other words, if it is adopted, and the marketing is permitted, the procedure outlined in this is adequate to insure no new resources are brought in to be sold, and so forth?

Mr. GEHRINGER. As sure as anyone can be.

Mr. FORSYTHE. I agree. I am sure you cannot say absolutely that nothing is ever going to move. I think it is an issue that we must face.

I suspect we will be talking to you more about this in other forums as we move forward with it.

I think that is all I have, Mr. Chairman.

Mr. BREAU. Thank you, Mr. Forsythe.

Mr. Emery?

Mr. EMERY. No questions at this time.

Mr. BREAU. Questions from counsel?

Mr. SPENSLEY. Yes.

Mr. Gehringer, could you relate to the committee your experience so far in interacting with the Fish and Wildlife Service to designate critical habitat, or listings of these species that may be endangered or threatened?

Mr. GEHRINGER. We have, of course, participated very closely in planning and trying to work out joint efforts to address this issue.

I feel the cooperation we have received has been good in that respect.

I will comment on one request or proposal for designating several species of turtles as threatened. There is a difference of opinion between the two Departments as to whether an environmental impact statement is required.

I think this is an honest difference of opinion between policy. We are proposing to move for public hearing to develop an impact statement.

Mr. SPENSLEY. Have you consulted with the Council on Environmental Quality for determination?

Mr. GEHRINGER. No.

Mr. SPENSLEY. Since the 1973 amendments, and since the memorandum of understanding with Fish and Wildlife Service, have you recommended to them any critical habitat areas to be listed, or to be proposed?

Mr. GEHRINGER. No, sir.

Mr. SPENSLEY. Have you recommended to them any listing, or delisting of any endangered species?

Mr. GEHRINGER. The sea turtles are the only ones.

Mr. SPENSLEY. How many full-time people does the National Marine Fisheries Service have in administering the endangered species program?

Mr. GEHRINGER. We have one full-time professional who coordinates the activity, and a clerk typist position at this time.

It should be recognized that we have other people working who are involved in law enforcement and administration activities and participation by legal counsel. These activities support the program effort.

Mr. SPENSLEY. As I understand, you have been operating with very few funds for the last several years, provisional funds, as I recall, from other programs in the Department?

Mr. GEHRINGER. Yes. These were reprogramed from other activities.

Mr. SPENSLEY. Do you feel that your request—let me state the question this way—the Appropriations Committee, as you indicated, but your budget by \$1.6 million, and yet I understand from your testimony you feel you can operate on the funds that they are suggesting being appropriated?

Mr. GEHRINGER. If I heard your question, you said we can operate?

Mr. SPENSLEY. I understood your testimony to say that you could operate based on the funds that would be appropriated.

Mr. GEHRINGER. We are going to operate on the fund we will be getting. We recognize we are not going to be able to do a number of things we would like to do. For example, we did not get \$600,000 for research. We had also hoped to get a million dollars for grants to the States.

Mr. SPENSLEY. I should have stated it differently. You clearly feel it is inadequate?

Mr. GEHRINGER. Yes, sir.

Mr. SPENSLEY. Has the National Marine Fisheries Service entered into any cooperative agreements with any States with respect to your jurisdiction?

Mr. GEHRINGER. We have approved the application of the State of New Jersey for a cooperative agreement. However, we have not entered into any agreements with any States. A model agreement has been developed, but there is no money.

Mr. SPENSLEY. You indicated you were beginning to develop some recovery plans for species. How many plans have actually been developed and carried through?

Mr. GEHRINGER. None, sir. We are working presently with the Department of Interior on one recovery plan that concerns the short-nose sturgeon.

Mr. SPENSLEY. You say you are working with Fish and Wildlife Service. Will that recovery team be exclusively National Marine Fisheries Service, or perhaps another way to ask the question is do you have to gain some approval from Fish and Wildlife Service to set up your own recovery team?

Mr. GEHRINGER. If I may defer to Mr. Hubley.

Mr. HUBLEY. Yes, I would be pleased to address that. We have more or less assumed the responsibility for the recovery team for shortnosed sturgeon from the Fish and Wildlife Service. They had initially undertaken the development of that recovery team in the Northeast. With the agreement concerning jurisdiction over certain species we have tentatively taken the lead on that recovery team.

Hopefully, we will be able to use the expertise provided by concerned State agencies and other Federal interests.

Mr. SPENSLEY. As I understand all the permitting and licensing for native species is carried on through the Fish and Wildlife Service, and the National Marine Fisheries Service does not engage in this activity?

Mr. GEHRINGER. We have our own permit system, separate and distinct from theirs, with respect to the species over which we have jurisdiction.

Mr. SPENSLEY. How many full-time people do you have in that program for endangered species?

Mr. GEHRINGER. The one persons I indicated, is the only full-time professional person we have on the staff with respect to the program.

Mr. SPENSLEY. Thank you.

Mr. BREAU. Any other questions?

The committee thanks you gentlemen for your testimony.

We are going to go ahead and take one more witness.

Dr. Talbot is not here yet, he will be here this afternoon.

So we will take Mr. John Grandy, executive vice president, Defenders of Wildlife.

#### **STATEMENT OF JOHN W. GRANDY, IV, EXECUTIVE VICE PRESIDENT, DEFENDERS OF WILDLIFE**

Mr. GRANDY. Thank you. My name is John Grandy. I am executive vice president of Defenders of Wildlife, a major national, Washington, D.C. based, environmental organization.

Defenders of Wildlife publishes the highly respected and acclaimed bimonthly Defenders of Wildlife magazine and engages in other activities designed to benefit and promote the welfare of wildlife and wildlife resources throughout the United States.

To this end Defenders testifies upon invitation before congressional committees such as this one, files legal actions with appropriate government agencies, and participates to the extent possible in meaningful agency decisionmaking processes.

I appreciate the opportunity and invitation to testify on behalf of Defenders of Wildlife, the Sierra Club, the New York Zoological Society, and the Animal Protection Institute of America.

We have been quite concerned with the Endangered Species Act of 1973. I personally began my involvement with this act in working through available channels to advance the Convention on International Trade in Species of Wild Fauna and Flora.

I participated in developing the language and concepts of the treaty, both with the IUCN and through the U.S. Department of the Interior and Department of State.

Specifically, I participated by helping to formulate the appendixes of protected species, as well as doing substantial work to communicate the purpose and objectives of various treaty provisions during the convention.

Mr. Chairman, with your permission, I would like to summarize portions of the statement.

Mr. BREAU. Your statement will be made a part of the record.

You may proceed.

[The letter accompanying the statement follows:]

EXECUTIVE OFFICE OF THE PRESIDENT,  
COUNCIL ON ENVIRONMENTAL QUALITY,  
Washington, D.C., February 3, 1975.

HON. ROGERS C. B. MORTON,  
Secretary of the Interior,  
Washington, D.C.

DEAR MR. SECRETARY: On December 30, 1974, notice of rule making appeared in the Federal Register regarding the threatened kangaroos. Similarly, on January 2, 1975, notice of proposed rule making appeared in the Register regarding the grizzly bear. This letter represents the Council's comments on those two actions.

We commend the Department of the Interior for taking these two actions. We realize that both have been highly controversial and there have been numerous delays and false starts. With these two actions, the Department is taking its first steps in public implementation of the Endangered Species Act of 1973, which was an important component of the Administration's Environmental Program. As a consequence, these two actions take on considerable significance as potential precedents.

In that regard, elements of the actions concern us greatly, particularly in light of the intent and substantive provisions of the Act.

Section 4(d) of the Endangered Species Act requires the Secretary of the Interior to promulgate "such regulations as he deems necessary and advisable to provide for the conservation of such (threatened) species." (Emphasis added). Conservation is defined, *inter alia*, as "... to use ... all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter (the Act) are no longer necessary. Such methods and procedures include ... research, census, law enforcement, habitat acquisition ... and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking" (16 U.S.C. 1532) (Emphasis added).

This language clearly restricts the use of regulated taking to the "extraordinary case" where population pressures cannot be otherwise relieved. In the absence of facts which clearly establish that the population pressures cannot be relieved in any other way, there would appear to be no basis for legally valid regulations on regulated taking. Also, the principal language establishes the goal of other regulations, to be promulgated, as the restoration of species to a non-threatened or non-endangered status.

In this regard, the regulations promulgated regarding the three species of kangaroo are not consistent with the letter or the spirit of the Endangered Species Act of 1973. The regulations purport to allow importation of taken kangaroos when (1) a sustained yield program is established that (2) is not detrimental to the survival of the species. Neither the "sustained yield program" nor the "not detrimental" test meet the statutory criterion, showing that population pressures cannot be otherwise relieved. Thus, we believe that the regulations should be revised or interpreted so as to be in keeping with the mandate of the Act.

The rules submitted with the proposed listing of the grizzly bear are also troublesome. One portion of the proposal indicates that de facto regulations will be promulgated which allow the taking (mostly by sport hunting) of up to 35 bears per year in the Bob Marshall Ecosystem. Again, in our view, the secretary must first fulfill the statutory burden by showing that the proposed taking by hunting will be the "extraordinary case" which follows substantial attempts to relieve population pressures by other means. In our view, this test, again, has not been met and we believe that the regulations and proposal for final action should be revised accordingly.

One other portion of the proposed regulations concerning grizzly bears is also of special concern to us. The regulations pertaining to listing of grizzlies in the Yellowstone ecosystem state that depredating bears may be taken. Similarly, the de facto regulations for the Bob Marshall Ecosystem state that nuisance (including depredating) bears may be taken.

We feel that the regulations in both cases should clearly differentiate between bears causing depredations on public and on private lands. On public lands, no threatened grizzly bears should be taken except for clear reasons of human safety.

Grizzly bears, and in fact all endangered and threatened species, are valued highly by the people of this nation. Public lands are lands held in trust for all Americans, not just one or another special interest group.

Certain uses of these lands require specific regulation and are a privilege, not a right. Grazing and ranching are such uses. Thus, in determining which of such discretionary uses may be allowed or may have priority, the public land manager must consider the impact of the proposed use on other public uses or values of those lands. Where there are public values, particularly wildlife such as the threatened grizzly on public lands, it may be logically argued that if a livestock owner wishes the privilege of grazing domestic livestock on the same area, he must accept some losses from the wildlife as part of the cost of doing his business on that public land. In such a case the restoration of the threatened species should be recognized as having a greater public value than the economic return to the affected rancher.

Considering this, we believe that taking of a threatened species committing depredations, or otherwise being a "nuisance," on public lands should be prohibited in any case not involving direct threats to human safety. In fact, we suggest that the intent of Section 7 (16 U.S.C. 1536) of the Act is, *inter alia*, to prohibit taking (killing) of endangered or threatened species on lands belonging to all of the American people, in any situation where it cannot be shown that such taking represents the "extraordinary case where population pressures . . . cannot be otherwise relieved."

Again, we are aware of the deep commitment with which the personnel in the Department of the Interior have approached the preservation of endangered and threatened species. Implementation of this law will undoubtedly aid in protecting both endangered species and environmental quality throughout the U.S. and the world. In that regard, we hope our comments are helpful in further administration of the law and in achieving its objectives.

Sincerely,

RUSSELL W. PETERSON, *Chairman.*

Mr. GRANDY. Thank you.

I would like to commend the Department of the Interior for the positive actions that it has taken to implement the Endangered Species Act of 1973. This has been a time-consuming process, and the Department has had to feel its way gingerly along a course lined alternately with egg shells and mines. In some ways implementation has proceeded adequately and we commend the Department and the Fish and Wildlife Service for actions in this regard.

Notwithstanding the above comments, implementation of both the Endangered Species Convention and the Endangered Species Act of 1973 has not been handled in a manner responsive to the terrible urgency of survival problems confronting endangered and threatened species throughout the world. The Endangered Species Convention is a particularly sensitive issue in this regard.

The Convention went into effect on July 1, 1975. To date, however, nothing substantive has been done to implement the Convention. Scientific and management authorities required by the Convention have not been named. Provisions of the Convention are not, to my knowledge, currently being enforced, except where certain species covered by the Convention are also covered by the Endangered Species Act of 1973. Plans listed pursuant to the Convention have not been dealt with in a substantive and professional manner.

Historically, the United States led the world in creating a convention with global perspectives. The meeting which resulted in the final convention was held here in the U.S. State Department building. The convention itself was, at the time, hailed as being a significant step forward. It can still be a significant step forward. However, the United States must once again exert the leadership role.

To date, the United States has not been leading. Quite to the contrary, the United States has dillydallied away valuable time and leadership initiative so that we now find substantial portions of the convention are being ignored.

Furthermore, the U.S. Department of the Interior even had to be petitioned to place the treaty's appendix I species on our own endangered species list. This represents sheer negligence and illustrated the dismal priority our Government has given to implementation of this valuable treaty.

Defenders of Wildlife urges on behalf of itself, the Sierra Club, the New York Zoological Society, and the Animal Protection Institute that the Endangered Species Convention be promptly implemented.

We hope that this congressional committee, which has such an outstanding record in wildlife conservation, can determine why this convention has not been adequately implemented by the U.S. Government, and we further hope that this committee can help to provide the necessary stimulus to have the convention properly implemented.

Unfortunately, delays in implementation of the convention are mirrored by delays in implementation of the Endangered Species Act of 1973. This is an important law. Its meaning was crystal clear to the U.S. public and to the U.S. Congress.

We need not reiterate all the reasons why it was enacted—it was enacted because of the broad public recognition for the plight of many declining species. As I stated earlier, implementation has been a time-consuming process.

The Fish and Wildlife Service has been required to explore slowly through unknown territory in terms of implementing this law. However, the necessity for caution and careful planning in implementing the law does not excuse the obvious flaws which have occurred.

Problems of implementation of the act inevitably may be divided into two portions: the substantive interpretation of the act with the consequences of that interpretation, and an internal implementation problem.

I will deal with the second problem first.

There have been numerous delays in implementation of the act. It is true without question that the act had to be implemented methodically and with care and feeling. However, inordinate delays are not appropriate.

For example, roughly 1 year from the date of enactment of the Endangered Species Act of 1973, the first listing of species under the new law was made. This was the kangaroo, a foreign species. The first American species to be proposed was the grizzly bear and this was not accomplished until January 2, 1975, more than a year after enactment of the law.

Unfortunately, this kind of delay more closely resembles neglect. I cannot place blame for this nor perhaps would if I could, but a pattern has developed over time, which is distressing in many ways and should be promptly and concisely dealt with by those administering the Fish and Wildlife Service and the endangered species program.

I am reluctant to mention one additional point concerning an internal implementation problem, but I will. This relates to the re-

current rumors outside of the Fish and Wildlife Service and outside of the Department of the Interior. There are widely spread rumors of personnel and morale problems within the segment of the Fish and Wildlife Service which handles the endangered species program. Morale problems in any organization are hardly new. Wherever there are a group of people, there are generally problems. However, the surprising and distressing aspect of these problems is that they have been heard often by members of the Washington environmental community, and even the environmental community in other portions of the country.

In fact, the morale problems and personnel problems were to one degree or another involved in the Jack Anderson column of last March, which soundly rebuked certain personnel within the office endangered species. While I do not suggest that is an appropriate subject for congressional action, I believe it must be brought to the attention of the appropriate committee of Congress, if for nothing more than their information.

In order to look at the substantive problems relating to implementation, I must first address the basic assumptions inherent in the Endangered Species Act of 1973. The law was timely, important and clearly understood by the public. It was and is a law to guarantee the protection and survival of endangered and threatened species throughout the United States. The underlying goal was not only to insure survival, but to insure to the extent possible, the restoration, I repeat, restoration, of endangered and threatened species to a point where they are no longer endangered and threatened.

This is clearly stated throughout the law, but most notably in the definition of conservation. In addition, the a priori assumption is that endangered and threatened species and others whose status is questionable are to be given the benefit of the doubt with respect to protection under the Endangered Species Act.

The law is succinct and clear on this point, and vagaries in bureaucratic interpretations that do not support these goals are without foundation in the law.

Within that framework, the Fish and Wildlife Service and National Marine Fisheries Service, and in fact, the U.S. Government, with the exception of the President's Council on Environmental Quality, have made serious errors in implementing the basic provisions of the Endangered Species Act of 1973.

The delays involved in adding species to lists of endangered or threatened species are a continuing problem. I alluded to this previously as an internal problem, which is partially true.

However, another portion of the problem area seems to relate to implementation and interpretation of substantive provisions of the act.

The act states that the Secretary shall use the best scientific and commercial data available in deciding whether or not to list a species.

Delays have reportedly occurred in the listing process due to interpretation of the act which essentially suggest that the Secretary wants all data that it may be possible to obtain—ever. This is contrary to the letter and spirit of the act.

The basic spirit of the act is to give species whose status is questionable the benefit of the doubt so as to insure their preservation.

And the act requires use of only the best available data—not irrefutable proof or all data that may ever be gathered.

In short, the Secretary and those administering the act must move with more vigor and less hesitation and delay in protecting the species that seem to qualify for protection. If we make an error, we only have succeeded in unnecessarily saving a species.

Another problem concerns the provisions regarding critical habitat of threatened and endangered species.

The Fish and Wildlife Service currently seems to be viewing critical habitat as that last ditch area in which the last 5 to 10 animals of any species will survive. However, critical habitat relates back to the basic assumptions of the act—to the goal of restoration.

In that vein critical habitat must be viewed as not just the habitat necessary to continue the existence of the remnants of any given species, but must be defined as that habitat which is necessary and critical to the survival, health, and subsequent restoration of a species.

Congress, in my view and in the view of many, did not intend that all endangered and threatened species would in fact be endangered or threatened forever, nor did they envision critical habitat as being that habitat of postage stamp size necessary to continue the survival of the last handful of any species.

Substantively, it is impossible to tell from day to day what habitat will be critical to the restoration and welfare of a species. The fact is that habitat necessary for survival and restoration must be considered critical until the agencies which are fostering and promoting development can prove that such habitat is not critical and necessary for the survival, welfare, and subsequent restoration of the species.

Without this, the whole meaning of section 7 and the meaning of the Endangered Species Act of 1973 will be in jeopardy. The alternative presupposes an ever-expanding list of endangered and threatened species with virtually no chance for restoration.

It is clear that in addition the authors of the act envisioned a broad and comprehensive review program relative to the proposals to modify, change or destroy habitat of any endangered species.

As a practical and procedural matter, this review process should have been and should be incorporated into the NEPA environmental impact statement review process. I am certain that this could be easily and quickly accomplished by an informal understanding between the President's Council on Environmental Quality and the U.S. Department of the Interior. Such a review process would incorporate detailed and substantive considerations of endangered species problems in the review of the environmental impacts of various Federal projects.

Unfortunately, to date the Interior Department has apparently not taken the initiative to accomplish this objective. Those portions of the Endangered Species Act dealing with habitat preservation are being incompletely implemented and badly compromised as a result.

We urge this committee to take a close look at and give firm guidance to the implementation of the critical habitat section of the act.

Mr. SPENSLEY. I understand that last week they did sit down with the Council on Environmental Quality for the first time, and are negotiating some arrangements.



Mr. GRANDY. Fantastic. I might assume that these meetings had something to do with these hearings.

The regulations surrounding lifting of endangered and threatened species are also of concern to Defenders of Wildlife, the Sierra Club, the New York Zoological Society, and the Animal Protection Institute.

Two species to which I refer particularly are the kangaroo and the grizzly bear.

I have attached to my statement a letter from the Chairman of the President's Council on Environmental Quality (CQ) to the Secretary of the Interior relative to these two species.

Primarily, the problems which now have only partially been solved, again concern the basic interpretations of the Endangered Species Act.

Both with respect to the kangaroo and to the grizzly bear, the Fish and Wildlife Service promulgated regulations which, at least initially, envisioned killing on a sustained yield basis threatened species of animals. This is entirely contrary to the spirit and letter of the act.

The definition of conservation states essentially that only in "extraordinary cases," where population pressures within an ecosystem cannot be relieved by other means, may regulated taking be allowed.

No doubt, the "extraordinary case" clause was prompted by a desire to insure that any allowed regulated taking would occur only when there were no alternatives to such taking, and therefore, any such taking would likely constitute a benefit to the species. This is entirely logical and in keeping with the spirit and mandate of the act.

However, there is clearly no logic in holding annual hunts on threatened and endangered species, particularly not programs of a commercial nature such as those envisioned with the regulations pertaining to the listing of the kangaroo as a threatened species.

To some extent, this problem was alleviated when, in the final rule-making, proposing the listing of the grizzly bear as a threatened species, did make an "extraordinary case" within the meaning of the Endangered Species Act of 1973. This extraordinary case, while being somewhat ill-defined, did, absent legal challenge, comply with the requirements of the act.

However, the Fish and Wildlife Service must realize to a greater extent than it currently has that an extraordinary case must be made each time the Service envisions promulgating regulations which allow the taking of threatened species. This has not yet been accomplished with respect to the kangaroo and we are fearful that, absent a strong congressional mandate, such a case will not regularly be made.

Such a case must be made. It is entirely logical that the language found in 16 U.S.C. 1532 must be present. We cannot envision annual regulations allowing the killing of threatened species for no substantial reason other than pressure from private interest groups.

Sport hunting, it may be argued, has not regularly been the cause of species becoming extinct or threatened. However, when a species is threatened or endangered, it does not allow logically that one can open a hunting season on such species.

Defenders of Wildlife and the other organizations that I am representing today consider that the U.S. Department of Interior's current inaction with respect to public lands and endangered species or threatened species represents a serious continuing breach of public faith and the public trust. Beyond and combined with the threatened species issue, the public lands may represent the most egregious practice of the Department of the Interior.

The letter of the chairman of the President's Council on Environmental Quality stated with accuracy and succinctness the point of the public's right to the public's animals on public lands.

Specifically, CEQ suggested that endangered and threatened species should not be taken for any reason, including depredations, except in cases involving human health and safety, and cases involving the "extraordinary case" clause, to which I have already alluded. The public generally and numerous public service organizations have stated this and supported CEQ's position.

The Interior Department, however, in promulgating final regulations with respect to the grizzly bear avoided entirely the issue of public lands and ignored the interpretation of the President's Council on Environmental Quality.

Specifically, Interior Department's regulations concerning the grizzly bear (reportedly contrary to staff recommendations) tends to treat public lands like private ranches. This is travesty.

When questioned relative to the reasons for not enforcing the public interest on public lands, in terms of protecting threatened species, the Interior Department has responded that they expect this matter to be handled under the critical habitat regulations.

While it is probably appropriate to consider all areas of the grizzly bear range as critical habitat, thus taking in the public land areas with which I am currently concerned, the issues of critical habitat and public are separate and distinct.

One issue relates to critical habitat and express requirements within the act. The critical habitat issue, in short, would apply to public as well as to private lands. If habitat is critical, it is designated as such pursuant to section 7 of the act.

However, the issue of public lands is entirely separate and distinct; that land is held for the public as a public trust and the public has rights with respect to it. The President's Council on Environmental Policy made that quite apparent and clear, as did the public.

It is the duty of the Interior Department to see that the public interest is supported; I urge this committee to take whatever actions are necessary to see that the Interior Department upholds this duty.

No testimony on the Endangered Species Act and its implementations would be complete without some discussion of budget. We all know that the endangered species program has suffered from inadequate funding. We have heard discussion of this this morning.

We are fully aware that additional money must be allocated to the recovery programs, to land acquisitions, and to generally achieving the goals of the act.

However, it is apparent that the implementation process must be revamped, that the basic assumptions of the act must be followed, and that personnel problems must be handled within the administrative structure of the Fish and Wildlife Service before additional moneys can be spent wisely.

These problems, and others, lead one to conclude that the entire solution is not new money. However, the money must and should be spent wisely as an obligation to good government and as an obligation to fulfilling the intent of the act.

In short, I strongly recommend more money. However, I urge this committee to use its influence to bring about substantial improvement over implementation.

In conclusion, I do commend the Fish and Wildlife Service, they have had to tackle a tough problem and they have made some mistakes. The question and the responsibility is that the Fish and Wildlife Service must do better. It must divest itself of the quagmire of inordinate delays in which it has become involved. It must throw away political concerns and concerns of offending special interest groups and put the intent of the law and the intent of the public first and foremost.

That is, the Fish and Wildlife Service must comply fully with this law so as to save and restore endangered species. I hope this committee can, as it has in the past, aid in attaining that goal.

Thank you, and I will be happy to answer any questions you may have.

Thank you.

Mr. BREAUX. Thank you, Mr. Grandy.

I have one question.

I should have asked this of Interior, but do you happen to know how many animals were listed on the original endangered species list when it went into effect?

Mr. GRANDY. Not off the top of my head, no, sir.

Mr. BREAUX. Mr. Forsythe?

Mr. FORSYTHE. Thank you, Mr. Chairman.

And thank you, Mr. Grandy.

On page 6 you refer to delays occurring in the listing process and you suggest that the Service wants all data that it may be possible to obtain ever before it will move forward in a listing.

I wonder if you could expand?

Mr. GRANDY. That problem was clearly apparent with the listing of the grizzly bear. Numerous staff reports concluded that the grizzly bear was either threatened or endangered. Staff reports were sent up the line. They were returned for more data, for clarification, and so forth.

In one case, the original status report suggested that the grizzly bear in one portion of its range was almost extinct and very few, if any, remained. That was sent up the line as the best staff data that could be obtained. However, it did not seem to jive with a preconceived threatened-species status so it was returned to the staff and the report was altered so that now the grizzly bear in this area will be listed as threatened instead of endangered.

Thus, there is a continuing problem both with respect to finding all the data that may ever be available and in politically massaging the data to support the desired goal.

Mr. FORSYTHE. I suppose, with the grizzly bear problem, for example, that you run into a problem of conflict over the use of public land and the production of food from grazing and that does create political problems and all kinds of problems.

Mr. GRANDY. I would say, yes, sir.

Mr. FORSYTHE. Do you see a way, as I look at the law, I do not think it demands what you say apparently is being used, getting all the data ever, but it does say "adequate" as I recall, or some such phrase, best available.

Mr. GRANDY. Best available, yes.

Mr. FORSYTHE. Best available data. Would you have any recommendation concerning the law, would you do anything about this problem?

Mr. GRANDY. No, sir, I do not think the problem is in the law. I think the problem is in the implementation. I think best available data combined with basic assumption of the act speak quite clearly to the need to protect things and in fact it is just best data available.

We are now faced with, for example, a Smithsonian list of endangered plants that is going to be coming under consideration. This is one substantial problem that will have to be addressed in that regard. Are we going to require from the Smithsonian scientists, presumably the best in the world, all the data that may ever be obtained, or are we going to take their word for the endangered and threatened status of these plants and move immediately to add to the list?

Mr. FORSYTHE. Maybe more so if we do not accept the Smithsonian report and instead go back and reprocess every plant through another scientific investigation. That seems to me to be unduly jamming up the procedure.

Mr. GRANDY. Surely. I think this kind of problem—

Mr. FORSYTHE. There are other biologists, experts, and what have you that would challenge the Smithsonian as regards the expertise.

Mr. GRANDY. Right. I would agree with that. I have argued with the Smithsonian myself in the past. But if we err on the side of protecting endangered species, and it is later proven with more or new data that we were wrong, we will only have succeeded, as I said in my statement, in "unnecessarily saving" a species, which is a pretty small price in my view.

Mr. FORSYTHE. That may be pretty good for alligators in Louisiana.

Mr. BREAUX. The gentleman will yield. The same problem works on the other side of the coin, because you have some problems with delays and time factors in getting an animal listed. There are also what I consider time delays that perhaps not necessary in getting an animal delisted. Again, to talk about alligators, where the Department of Interior was requiring data from Florida be considered in determining whether the alligator in Louisiana should be delisted.

I am sure that you are probably not asking that we shorten the time period that is being used to delist an animal which is being requested to be taken off the list?

Mr. GRANDY. No, sir, I am not. In fact, again, this may be contrary to the basic assumptions and goals of the act. I do think we have to be quite careful in delisting species, particularly those that are going to become immediately susceptible to commercial and other pressures of that type. Because, if we make a serious error in delisting an animal, we may lose it.

Mr. BREAUX. That argument is used everytime we have a defense budget up for appropriations.

Mr. GRANDY. I am not up to the defense budget.

Mr. BREAUX. It is the same argument.

Mr. FORSYTHE. I do not believe I have any other questions. I thank you very much for your testimony. I think it is very, very helpful.

Mr. BREAUX. Mr. Emery.

Mr. EMERY. Thank you very much, Mr. Chairman.

Again, referring to the same statement that Mr. Forsythe referred to, I was frankly a little concerned about one of the statements that was made earlier today about 20,000 species being recommended and 600 are to be endangered. It seems to me if we are making that kind of determination that 600 out of 20,000 have been proposed for endangered species classification, maybe there is enough evidence to indicate the organization is not operating as quickly as might be and I am not sure that anything the Government does can work fast enough to allow us to classify and study all 600, certainly all 20,000 of these species in anything less than a 25-year period. Of course, that is being a little facetious.

Do you feel that of that list of 600, to which we have been referring, there are a significant number of those species that are so severely threatened that normal bureaucratic delays are going to be a definite problem?

Mr. GRANDY. Are you referring to appendix 1 species?

Mr. EMERY. Yes, sir.

Mr. GRANDY. Yes, sir; I was involved in putting those animals on various appendices in that treaty. I can say I do not have all the direct evidence, I can state with certainty that many of the countries in which those animals are found are quite concerned; quite concerned with the trade problems, they are concerned that they are going to lose the animals.

Mr. EMERY. But you would have no hesitation from the basis of your information and the information of scientists around the world that certainly most or at least some of those species on that list should be immediately protected?

Mr. GRANDY. Yes, sir, I would have no hesitation. In fact, I suggest they should be protected under our Endangered Species Act, immediately. There would be adequate time to go through the convention process of revising those appendices and through the process of delisting those animals under our U.S. laws should they, at some future time, be found not to be endangered.

Mr. EMERY. I think another question is relevant to delays. How many of those species are involved in some commercial enterprise, or how many of those species would be removed from some income-producing business should they be listed under endangered species list?

What I am getting at is that, certainly there are a dozen or more involved in some commercial enterprise. Take these species out of the commercial chain, let us say, commercial cycle, and they will cause a loss of income, loss of jobs, economic displacement and all

of that, which is one of the basic arguments against protecting whales, et cetera. How many of those other species also are really not involved in commercial enterprise, but just are not listed as endangered species because no one has gotten around to it yet?

Mr. GRANDY. I would have to go back to the list. I do not have an estimate.

Mr. EMERY. You do not have any kind of guess at all?

Mr. GRANDY. You obviously know that some of them are heavily involved. Crocodilians, for example, the big cats, and others. I remember there was quite a bit of concern that many of them would—though not a major item in commercial trade—would become collectors' items, just by virtue of being placed on the appendices to the convention. That is listing these animals is not likely to cause a substantial economic displacement; but some of those species whose numbers are currently low could be irreparably damaged by even a small amount of collection. That is one of the reasons that implementation at this point is such a necessary thing to remove the threat to these species.

Mr. EMERY. Is there a way to get a list, if there is a list in existence, of species that have been considered or threatened, that are not involved in any commercial enterprise, also a list of species that could be or should be named immediately without any logical reason for delays?

Mr. GRANDY. I suppose there might be, but I do not have access.

Mr. SPENSLEY. If the gentleman would yield. We might request the Interior Department to present that to us by next Monday.

Mr. EMERY. I would like to see that. One thing struck me as strange. We do not really have a list, and we are not really being presented with a list of species or classification of species in a way that I think is important for this discussion and I would very much appreciate having such a list.

The point I am getting to through this rather rambling question I have asked is that maybe there is some justification for some species to go through a more rigorous examination process before being named to any list simply because we will have to address ourselves to some of the economic displacements that may occur. I think everyone will agree that it is reasonable to admit that a problem exists, and we must find some kind of way to bolster our arguments in favor of the endangered species. But on the other hand, there must be a number of these species that could be and should be named to a list and protected immediately. I think if we could find out which species these were, and prove to mutual satisfaction that they are not justifiably delayed, we might be able to protect a significant number of them.

Mr. GRANDY. I understand your point. My feeling currently is that these animals are in low-enough numbers; that their status is bad to such an extent that they are either endangered or threatened; that there is probably not a great deal of money to be had commer-

cially exploring; and that in any event the idea I think to the public—certainly those groups that I represent today and many others in those room—the idea of commercially exploiting threatened and endangered species is entirely contrary to our belief and expectations.

Mr. EMERY. I agree entirely. I will certainly put survival of species far above any commercial enterprise or income. But we are working with many divergent viewpoints. And there are some people in a position of influence who do not share our viewpoint. My suggestion is a way to protect some species immediately that are not tied up in this debate, and we might be able to concentrate our efforts in the future on that lesser number of species over which we may become involved in some philosophical or economic argument.

My argument is to protect those that we can immediately and to concentrate on the economic arguments, whatever that might be.

Mr. GRANDY. Yes, sir.

Mr. EMERY. Thank you.

Mr. BREAUX. The Chair will note that Mr. Baysinger is here and perhaps we could get a response to Mr. Emery's question from Interior on the question he posed by Monday.

Mr. BAYSINGER. Yes.

[The following was submitted:]

**A LISTING OF FAUNAL AND FLORAL TAXA THE DEPARTMENT OF THE INTERIOR HAS BEEN PETITIONED TO ADD TO THE LISTS OF ENDANGERED OR THREATENED SPECIES**

The following pages list those taxa for which the Department of the Interior has been petitioned to add to the Lists of Threatened or Endangered Species promulgated pursuant to the Endangered Species Act of 1973. An attempt has been made to identify those taxa which could be listed without creating major controversies. It should be realized, however, that in some cases potential areas of conflict cannot be identified until the species is proposed or actually listed. In other cases, the act of listing does not create controversies but subsequent actions taken on behalf of the species—i.e., determination of Critical Habitat etc.—may.

On the other hand many species which appear controversial on the surface may prove to be less so once the listing process is underway and the parties on both side of the issue have a clearer view of the situation.

In many cases the taxa noted on the following list already appear on Appendix I or II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This Convention entered into effect internationally on July 1, 1975. Most of the sanctions that would be brought about by listing these taxa on the Lists of Endangered or Threatened Species will accrue from their inclusion on the Appendices to the Convention insofar as import, export etc. are concerned. Therefore, the question of controversial or not essentially is moot with regard to most of those taxa.

The following lists also contain those floral taxa included in the Smithsonian Institution's "Report on Endangered and Threatened Plant Species of the United States" which was presented to the Congress as Serial Publication No. 94-A dated January 9, 1974.

Finally, it should be understood that (1) the attached lists were prepared hurriedly—it is likely that 3 different professionals would give you 3 different answers on a list of this type, (2) it makes little difference whether or not the species is controversial—we intend to list them when they qualify regardless and (3) controversy has little or nothing to do with the time and effort it takes to list a species—the same basic data and the same set of documents are needed in either case.

## MAMMALIA—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS

| Common name                       | Scientific name                        | Controversial         |                  | On con-<br>vention | Comments |
|-----------------------------------|--|-----------------------|------------------|--------------------|----------|
|                                   |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Tree kangaroo.....                | Dendrolagus inustus.....               |                       |                  | X                  | NC       |
| Do.....                           | Dendrolagus ursinus.....               |                       |                  | X                  | NC       |
| Hedgehog.....                     | Erinaceus frontalis.....               |                       |                  | X                  | NC       |
| Slow loris.....                   | Nycticebus concang.....                |                       |                  | X                  | NC       |
| Slender loris.....                | Loris cardigradus.....                 |                       |                  | X                  | NC       |
| Weeper capuchin.....              | Cebus capucinus.....                   | X                     |                  | X                  |          |
|                                   | Macaca sylvanus.....                   |                       |                  | X                  |          |
| Uhehe red colobus.....            | Colobus badius gordonorum.....         |                       |                  | X                  | NC       |
| Olive colobus.....                | Colobus verus.....                     |                       |                  | X                  | NC       |
| Snub-nosed langur.....            | Rhinopithecus roxellanae.....          |                       |                  | X                  | NC       |
| Nilgiri langur.....               | Presbytis johnii.....                  |                       |                  | X                  | NC       |
| Howler monkey.....                | Alouatta palliata (villosa).....       |                       |                  | X                  |          |
| Golden langur.....                | Presbytis geei.....                    |                       |                  | X                  | NC       |
| Langur.....                       | Presbytis pileatus.....                |                       |                  | X                  | NC       |
| Do.....                           | Presbytis entellus.....                |                       |                  | X                  | NC       |
| Proboscis monkey.....             | Nasalis larvatus.....                  |                       |                  | X                  | NC       |
| Gibbons.....                      | Hylobates spp.....                     |                       |                  | X                  | NC       |
| Siamang.....                      | Symphalangus syndactylus.....          |                       |                  | X                  | NC       |
| Chimpanzee.....                   | Pan paniscus.....                      | X                     |                  | X                  |          |
| Pigmy chimpanzee.....             | Pan troglodytes.....                   | X                     |                  | X                  |          |
| Giant anteater.....               | Myrmecophaga tridactyla.....           |                       |                  | X                  | NC       |
| Tamandua.....                     | Tamandua tetradactyla chapadensis..... |                       |                  | X                  | NC       |
| Three-toed sloth.....             | Bradypus boliviensis.....              |                       |                  | X                  | NC       |
| Giant armadillo.....              | Priontodes giganteus (= maximus).....  |                       |                  | X                  | NC       |
| Scaly anteater.....               | Manis temminckii.....                  |                       |                  | X                  | NC       |
| Pangolin.....                     | Manis crassicaudata.....               |                       |                  | X                  | NC       |
| Chinese pangolin.....             | Manis pentadactyla.....                |                       |                  | X                  | NC       |
| Malayan pangolin.....             | Manis javanica.....                    |                       |                  | X                  | NC       |
| Hispid hare.....                  | Caprolagus hispidus.....               |                       |                  | X                  | NC       |
| Sumatra short-eared rabbit.....   | Nesolagus netscheri.....               |                       |                  | X                  | NC       |
| Giant squirrels.....              | Ratufa spp.....                        |                       |                  | X                  | NC       |
| Four-striped ground squirrel..... | Lariscus hosei.....                    |                       |                  | X                  | NC       |
| Beaver.....                       | Castor canadensis frondator.....       |                       |                  | X                  | NC       |
| Do.....                           | Castor canadensis repentinus.....      |                       |                  | X                  | NC       |
| Do.....                           | Castor fiber birulaia.....             |                       |                  | X                  | NC       |
| Mexican beaver.....               | Castor canadensis mexicanus.....       |                       |                  | X                  | NC       |
| Australian native mouse.....      | Zyomys pedunculatus.....               |                       |                  | X                  | NC       |
| Do.....                           | Notomys aqualo.....                    |                       |                  | X                  | NC       |
| Chinchilla.....                   | Chinchilla brevicaudata boliviana..... |                       |                  | X                  | NC       |
| Phillips kangaroo rat.....        | Dipodomys phillipsii phillipsii.....   |                       |                  | X                  | NC       |
| Muskrat.....                      | Ondatra zibethicus bernardi.....       |                       |                  | X                  | NC       |
| Gray wolf.....                    | Canis lupus pallipes.....              |                       |                  | X                  | NC       |
| Do.....                           | Canis lupus crassodon.....             |                       |                  | X                  | NC       |
| Maned wolf.....                   | Chrysocyon brachyurus.....             |                       |                  | X                  | NC       |
| Gray wolf.....                    | Canis lupus monstabilis.....           |                       |                  | X                  | NC       |
| Spotted linsang.....              | Prionodon pardicolor.....              |                       |                  | X                  | NC       |
| Linsang.....                      | Prionodon linsang.....                 |                       |                  | X                  | NC       |
| Otter civet.....                  | Cynogale bennetti.....                 |                       |                  | X                  | NC       |
| Dwarf mongoose.....               | Helogale derbianus.....                |                       |                  | X                  | NC       |
| Polar bear.....                   | Ursus (Thalartcos) maritimus.....      |                       | X                | X                  |          |
| Malayan sun bear.....             | Helarctos malayanus.....               |                       |                  | X                  | NC       |
| Glacier bear.....                 | Ursus americanus emmonsii.....         |                       | X                | X                  |          |
| Brown bear.....                   | Ursus arctos (Italian population)..... |                       |                  | X                  | NC       |
| Marten.....                       | Martes americana atrata.....           | X                     |                  | X                  |          |
| Long-tailed otter.....            | Lutra longicaudis.....                 |                       |                  | X                  | NC       |
| Marine otter.....                 | Lutra felina.....                      |                       |                  | X                  | NC       |
| Southern river otter.....         | Lutra provocax.....                    |                       |                  | X                  | NC       |
| Southern sea otter.....           | Enhydra lutris nereis.....             |                       | X                | X                  |          |
| Lesser panda.....                 | Ailurus fulgens.....                   |                       |                  | X                  | NC       |
| Flat-headed cat.....              | Felis planiceps.....                   |                       |                  | X                  | NC       |
| Black-footed cat.....             | Felis nigripes.....                    |                       |                  | X                  | NC       |
| Costa Rican puma.....             | Felis concolor costaricensis.....      |                       |                  | X                  | NC       |
| Pampas cat.....                   | Felis colocolo pajeros.....            |                       |                  | X                  | NC       |
| Do.....                           | Felis colocolo crespoi.....            |                       |                  | X                  | NC       |
| Do.....                           | Felis colocolo budini.....             |                       |                  | X                  | NC       |
| Mountain lion (puma).....         | Felis concolor missoulensis.....       |                       |                  | X                  | NC       |
| Do.....                           | Felis concolor mayensis.....           |                       |                  | X                  | NC       |
| Do.....                           | Felis concolor azteca.....             |                       |                  | X                  | NC       |
| Serval.....                       | Felis serval.....                      |                       |                  | X                  | NC       |
| Spanish lynx.....                 | Felis lynx isabellina.....             |                       |                  | X                  | NC       |
| Caracal.....                      | Felis (= Caracal) caracal.....         |                       |                  | X                  | NC       |
| Temminck's cat.....               | Felis temminckii.....                  |                       |                  | X                  | NC       |
| Leopard cat.....                  | Felis bengalensis bengalensis.....     |                       |                  | X                  | NC       |
| Jaguarundi.....                   | Felis yagouaroundi.....                |                       |                  | X                  | NC       |
| Marbled cat.....                  | Felis marmorata.....                   |                       |                  | X                  | NC       |
| Andean cat.....                   | Felis jacobita.....                    |                       |                  | X                  | NC       |
| Bobcat.....                       | Felis (Lynx) rufus escuinapae.....     |                       |                  | X                  | NC       |
| Clouded leopard.....              | Neofelis nebulosa.....                 |                       |                  | X                  | NC       |
| Southern fur seal.....            | Arctocephalus australis.....           |                       |                  | X                  | NC       |



**MAMMALIA—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name                       | Scientific name                            | Controversial         |                  | On con-<br>vention | Comments |
|-----------------------------------|--|-----------------------|------------------|--------------------|----------|
|                                   |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Galapagos fur seal.....           | Arctocephalus galapagoensis.....           |                       |                  | X                  | NC       |
| Juan Fernandez fur seal.....      | Arctocephalus philippii.....               |                       |                  | X                  | NC       |
| Guadalupe fur seal.....           | Arctocephalus townsendi.....               |                       |                  | X                  | NC       |
| South Atlantic elephant seal..... | Mirounga leonina.....                      |                       |                  | X                  | NC       |
|                                   | Mirounga ostralis.....                     |                       |                  | X                  | NC       |
| Aardvark.....                     | Orycteropus afer.....                      |                       |                  | X                  | NC       |
| West African manatee.....         | Trichechus senegalensis.....               |                       |                  | X                  | NC       |
| Asian elephant.....               | Elephas maximus.....                       |                       | X                | X                  |          |
| Black rhinoceros.....             | Diceros bicornis.....                      |                       | X                | X                  |          |
| Przewalski's horse.....           | Equus przewalskii.....                     |                       |                  | X                  | NC       |
| Mountain zebra.....               | Equus zebra zebra.....                     |                       |                  | X                  | NC       |
| Asian tapir.....                  | Tapirus indicus.....                       |                       |                  | X                  | NC       |
| Babiroussa.....                   | Babiroussa babiroussa.....                 |                       |                  | X                  | NC       |
| Bactrian camel.....               | Camelus bactrianus.....                    |                       |                  | X                  | NC       |
| Pigmy hippopotamus.....           | Choeropus liberiensis.....                 |                       |                  | X                  | NC       |
| Bactrian deer.....                | Cervus elaphus bactrianus.....             |                       |                  | X                  | NC       |
| Pudu.....                         | Pudu mephistophilus.....                   |                       |                  | X                  | NC       |
| Musk deer.....                    | Moschus moschiferus moschiferus.....       |                       |                  | X                  | NC       |
| Hog deer.....                     | Axis (Hyelaphus) porcinus annamiticus..... |                       |                  | X                  | NC       |
| Philippine deer.....              | Axis (Hyelaphus) calamianensis.....        |                       |                  | X                  | NC       |
| South Andean huemal.....          | Hippocamelus bisulcus.....                 |                       |                  | X                  | NC       |
| North Andean huemal.....          | Hippocamelus antisensis.....               |                       |                  | X                  | NC       |
| Pampas deer.....                  | Ozotoceras bezoarcticus.....               |                       |                  | X                  | NC       |
| Pudu.....                         | Pudu pudu.....                             |                       |                  | X                  | NC       |
| Mexican pronghorn.....            | Antilocapra americana mexicana.....        |                       |                  | X                  | NC       |
| Mountain anoa.....                | Bubalus (Anoa) quarlesi.....               |                       |                  | X                  | NC       |
| Lechwe.....                       | Kobus lechwe.....                          |                       |                  | X                  | NC       |
| Sable antelope.....               | Hippotragus niger varians.....             |                       |                  | X                  | NC       |
| Dorcas gazelle.....               | Damaliscus dorcas dorcas.....              |                       |                  | X                  | NC       |
| Saiga antelope.....               | Saiga tatarica mongolica.....              |                       |                  | X                  | NC       |
| Goral.....                        | Naemorhedus goral.....                     |                       |                  | X                  | NC       |
| Sumatran serow.....               | Capricornis sumatraensis.....              |                       |                  | X                  | NC       |
| Chamois.....                      | Rupicapra rupicapra ornata.....            |                       |                  | X                  | NC       |
| Straight-horned markhor.....      | Capra falconeri jerdoni.....               |                       |                  | X                  | NC       |
| Kabul markhor.....                | Capra falconeri megaceros.....             |                       |                  | X                  | NC       |
| Chiltan markhor.....              | Capra falconeri chiltanensis.....          |                       |                  | X                  | NC       |
| Urial.....                        | Ovis orientalis ophion.....                |                       |                  | X                  | NC       |
| Argali.....                       | Ovis ammon hodgsoni.....                   |                       |                  | X                  | NC       |
| Shapo.....                        | Ovis vignei.....                           |                       |                  | X                  | NC       |
| Duiker.....                       | Cephalophus monticola.....                 |                       |                  | X                  | NC       |
| Scimitar-horned oryx.....         | Oryx (tao) dammah.....                     |                       |                  | X                  | NC       |
| Addax.....                        | Addax nasomaculatus.....                   |                       |                  | X                  | NC       |
| Tibetan antelope.....             | Pantholops hodgsoni.....                   |                       |                  | X                  | NC       |
| Markhor.....                      | Capra falconeri.....                       |                       |                  | X                  | NC       |
| Argali or Marco Polo sheep.....   | Ovis ammon.....                            |                       |                  | X                  | NC       |
| Bighorn sheep.....                | Ovis canadensis.....                       |                       | X                | X                  |          |

NOTE.—NC=Noncontroversial.

**AVES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS**

| Common name                          | Scientific name                        | Controversial         |                  | On con-<br>vention | Comments |
|--------------------------------------|--|-----------------------|------------------|--------------------|----------|
|                                      |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Jackass penguin.....                 | Spheniscus demersus.....               |                       |                  | X                  | NC       |
| Nandu suri.....                      | Rhea americana albescent.....          |                       |                  | X                  | NC       |
| Red-winged tinamou.....              | Rhynchotus rufescens rufescens.....    |                       |                  | X                  | NC       |
| Do.....                              | Rhynchotus rufescens pallidus.....     |                       |                  | X                  | NC       |
| Do.....                              | Rhynchotus rufescens maculicollis..... |                       |                  | X                  | NC       |
| Solitary tinamou.....                | Tinamus solitarius.....                |                       |                  | X                  | NC       |
| Black stork.....                     | Ciconia nigra.....                     |                       |                  | X                  | NC       |
| Southern bald ibis.....              | Geronticus calvus.....                 |                       |                  | X                  | NC       |
| Spoonbill.....                       | Platalea leucorodia.....               |                       |                  | X                  | NC       |
| Chilean flamingo.....                | Phoenicopterus ruber chilensis.....    |                       |                  | X                  | NC       |
| Andean flamingo.....                 | Phoenicoparrus andinus.....            |                       |                  | X                  | NC       |
| James flamingo.....                  | Phoenicoparrus jamesi.....             |                       |                  | X                  | NC       |
| Auckland Island flightless teal..... | Anas aucklandica aucklandica.....      |                       |                  | X                  | NC       |
| New Zealand brown teal.....          | Anas aucklandica chlorotis.....        |                       |                  | X                  | NC       |
| Campbell Island flightless teal..... | Anas aucklandica nesiotis.....         |                       |                  | X                  | NC       |
| Madagascar teal.....                 | Anas bernieri.....                     |                       |                  | X                  | NC       |
| Marianas mallard.....                | Anas outalei.....                      |                       |                  | X                  | NC       |
| Cuban tree duck.....                 | Dendrocygna arborea.....               |                       |                  | X                  | NC       |
| Comb duck.....                       | Sarkidiornis melanotos.....            |                       |                  | X                  | NC       |
| Tule white-fronted goose.....        | Anser albifrons gambelli.....          |                       |                  | X                  | NC       |
| Trumpeter swan.....                  | Cygnus buccinator.....                 |                       | X                | X                  |          |

**AVES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name                         | Scientific name                           | Controversial         |                  | On con-<br>vention | Comments |
|-------------------------------------|---|-----------------------|------------------|--------------------|----------|
|                                     |   | Commercial<br>reasons | Other<br>reasons |                    |          |
| Jankowski's swan                    | <i>Cygnus bewickii jankowskii</i>         |                       |                  | X                  | NC       |
| Black-necked swan                   | <i>Cygnus melanocoryphus</i>              |                       |                  | X                  | NC       |
| Cascoroba swan                      | <i>Coscoroba coscoroba</i>                |                       |                  | X                  | NC       |
| Red-breasted goose                  | <i>Branta ruficollis</i>                  |                       |                  | X                  | NC       |
| Pink-headed duck                    | <i>Rhodonessa caryophyllacea</i>          |                       |                  | X                  | NC       |
| Dalmatian pelican                   | <i>Pelicanus crispus</i>                  |                       |                  | X                  | NC       |
| Abbott's booby                      | <i>Sula abbotti</i>                       |                       |                  | X                  | NC       |
| Frigate bird                        | <i>Fregata andrewsi</i>                   |                       |                  | X                  | NC       |
| Harpy eagle                         | <i>Harpia harpyja</i>                     |                       |                  | X                  | NC       |
| Greenland white-tailed eagle        | <i>Haliaeetus albicilla greenlandicus</i> |                       |                  | X                  | NC       |
| African lammergeyer                 | <i>Gypaetus barbatus meridionalis</i>     |                       |                  | X                  | NC       |
| Golden eagle                        | <i>Aquila chrysaetos</i>                  |                       | X                | X                  |          |
| Falconidae                          | All species                               |                       | X                | X                  |          |
| Nicobar megapode                    | <i>Megapodius freycinet nicobariensis</i> |                       |                  | X                  | NC       |
| Nicobar megapode                    | <i>Meapodius freycinet abbotti</i>        |                       |                  | X                  | NC       |
| Black-fronted piping-guan           | <i>Pipile jacutinga</i>                   |                       |                  | X                  | NC       |
| Mitu                                | <i>Mitu mitu mitu</i>                     |                       |                  | X                  | NC       |
| Northern greater prairie chicken    | <i>Tympanuchus cupido pinnatus</i>        |                       | X                | X                  |          |
| Himalayan monal                     | <i>Lophophorus impejanus</i>              |                       |                  | X                  | NC       |
| Elliot's pheasant                   | <i>Syrnaticus ellioti</i>                 |                       |                  | X                  | NC       |
| Tibetan snowcock                    | <i>Tetraogallus tibetanus</i>             |                       |                  | X                  | NC       |
| Montezuma quail                     | <i>Cyrtonyx montezumae merriami</i>       |                       |                  | X                  | NC       |
| Tadjoura francolin                  | <i>Francolinus ochropectus</i>            | X                     |                  | X                  |          |
| Swierstra's francolin               | <i>Francolinus swierstra</i>              | X                     |                  | X                  |          |
| Cheer pheasant                      | <i>Catreus wallichii</i>                  | X                     |                  | X                  |          |
| Malaysian peacock pheasant          | <i>Polyplectron malacense</i>             | X                     |                  | X                  |          |
| Peacock pheasant                    | <i>Polyplectron germaini</i>              | X                     |                  | X                  |          |
| Do                                  | <i>Polyplectron bicalacratum</i>          | X                     |                  | X                  |          |
| Gray jungle fowl                    | <i>Gallus sonnerati</i>                   |                       |                  | X                  |          |
| Great Argus pheasant                | <i>Argusianus argus</i>                   |                       |                  | X                  |          |
| Blood-pheasant                      | <i>Ithaginis cruentus</i>                 | X                     |                  | X                  |          |
| Montezuma quail                     | <i>Cyrtonyx montezumae montezumae</i>     | X                     |                  | X                  |          |
| Do                                  | <i>Cyrtonyx montezumae mearnsi</i>        | X                     |                  | X                  |          |
| Cuba sandhill crane                 | <i>Grus canadensis nesiotis</i>           |                       |                  | X                  | NC       |
| Black-necked crane                  | <i>Grus nigricollis</i>                   |                       |                  | X                  | NC       |
| White-naped crane                   | <i>Grus vipio</i>                         |                       |                  | X                  | NC       |
| Crowned crane                       | <i>Balearica regulorum</i>                |                       |                  | X                  | NC       |
| Florida sandhill crane              | <i>Grus canadensis pratensis</i>          |                       |                  | X                  | NC       |
| Lord Howe wood rail                 | <i>Tricholimnas sylvestris</i>            |                       |                  | X                  | NC       |
| Eastern weka                        | <i>Gallirallus australis hectori</i>      |                       |                  | X                  | NC       |
| Bengal floricon                     | <i>Eupodotis bengalensis</i>              |                       |                  | X                  | NC       |
| Great bustard                       | <i>Otis tarda</i>                         |                       |                  | X                  | NC       |
| Slender-billed curlew               | <i>Numenius tenuirostris</i>              |                       |                  | X                  | NC       |
| Little whimbrel                     | <i>Numenius minutus</i>                   |                       |                  | X                  | NC       |
| Nordmann's greenshank               | <i>Tringa guttifer</i>                    |                       |                  | X                  | NC       |
| Brown-headed gull                   | <i>Larus brunneicephalus</i>              |                       |                  | X                  | NC       |
| Khar turuut tsakhai                 | <i>Larus relictus</i>                     |                       |                  | X                  | NC       |
| Bleeding heart pigeon               | <i>Gallicolumba luzonica</i>              |                       |                  | X                  | NC       |
| Blue-crowned pigeon                 | <i>Goura cristata</i>                     |                       |                  | X                  | NC       |
| Maroon-breasted crowned pi-<br>geon | <i>Goura scheepmakeri</i>                 |                       |                  | X                  | NC       |
| Victoria crowned pigeon             | <i>Goura victoria</i>                     |                       |                  | X                  | NC       |
| Nicobar pigeon                      | <i>Caloenas nicobarica pelewensis</i>     |                       |                  | X                  | NC       |
| Mindoro zone-tailed pigeon          | <i>Ducula mindorensis</i>                 |                       |                  | X                  | NC       |
| Seychelles Vasa parrot              | <i>Coracopsis nigra barklyi</i>           | X                     |                  | X                  |          |
| Masked parakeet                     | <i>Prosopeia personata</i>                | X                     |                  | X                  |          |
| Horned parakeet                     | <i>Eunymphicus cornutus</i>               | X                     |                  | X                  |          |
| Antipodes Island parakeet           | <i>Cyanoramphus unicolor</i>              | X                     |                  | X                  |          |
| Norfolk Island parakeet             | <i>Cyanoramphus novaezelandiae</i>        | X                     |                  | X                  |          |
| Orange-fronted parakeet             | <i>Cyanoramphus malherbi</i>              | X                     |                  | X                  |          |
| Cape parrot                         | <i>Poicephalus robustus</i>               | X                     |                  | X                  |          |
| Blue-naped parrot                   | <i>Tanygnathus luzoniensis</i>            | X                     |                  | X                  |          |
| Great black cockatoo                | <i>Probosciger aterrimus</i>              | X                     |                  | X                  |          |
| Red-spectacled parrot               | <i>Amazona pretrei pretrei</i>            | X                     |                  | X                  |          |
| Vinaceous breasted parrot           | <i>Amazona vinacea</i>                    | X                     |                  | X                  |          |
| Glaucous macaw                      | <i>Anodorhynchus glaucus</i>              | X                     |                  | X                  |          |
| Indigo macaw                        | <i>Anodorhynchus leari</i>                | X                     |                  | X                  |          |
| Little blue macaw                   | <i>Cyanopsitta spixii</i>                 |                       |                  | X                  |          |
| Red-capped parrot                   | <i>Pionopsitta pileata</i>                | X                     |                  | X                  |          |
| Golden parakeet                     | <i>Aratinga guaruba</i>                   |                       |                  | X                  |          |
| New Zealand parakeet                | <i>Cyanoramphus novaezelandiae</i>        |                       |                  | X                  | NC       |
| Principe parrot                     | <i>Psittacus erithacus princeps</i>       |                       |                  | X                  |          |
| Hook-billed hermit                  | <i>Ramphodon dohrni</i>                   |                       |                  | X                  |          |
| Resplendent quetzal                 | <i>Pharomachrus mocinno mocinno</i>       |                       |                  | X                  | NC       |
| Do                                  | <i>Pharomachrus mocinno costaricensis</i> |                       |                  | X                  | NC       |
| Giant Scops Owl                     | <i>Otus gurneyi</i>                       |                       |                  | X                  | NC       |
| Virgin Island screech owl           | <i>Otus nudipes newtoni</i>               |                       |                  | X                  |          |
| Helmeted hornbill                   | <i>Rhinoplax vigil</i>                    |                       |                  | X                  | N        |
| Rhinoceros hornbill                 | <i>Buceros rhinoceros rhinoceros</i>      |                       |                  | X                  |          |
| Great Indian hornbill               | <i>Bucercs bicornis</i>                   |                       |                  | X                  |          |
| Rufous hornbill                     | <i>Buceros hydrocorax hydrocorax</i>      |                       |                  | X                  |          |

**AVES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name                | Scientific name                        | Controversial         |                  | On con-<br>vention | Comments |
|----------------------------|--|-----------------------|------------------|--------------------|----------|
|                            |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Narcondam hornbill         | <i>Aceros narcondami</i>               |                       |                  |                    |          |
| Cock-of-the-rock           | <i>Rupicola rupicola</i>               |                       |                  |                    |          |
| Peruvian cock-of-the-rock  | <i>Rupicola peruviana</i>              |                       |                  |                    |          |
| Banded cotinga             | <i>Cotinga maculata</i>                |                       |                  |                    |          |
| White-winged cotinga       | <i>Xipholena atro-purpurea</i>         |                       |                  |                    |          |
| Kock's pitta               | <i>Pitta kochi</i>                     |                       |                  |                    |          |
| Fairy pitta                | <i>Pitta brachyura</i>                 |                       |                  |                    |          |
| White-eyed river martin    | <i>Psuedochelidon sirintarae</i>       |                       |                  |                    |          |
| All species—Paradisaeidae  |  |                       |                  |                    |          |
| Western rufous bristlebird | <i>Dasyornis broadbenti littoralis</i> |                       |                  |                    |          |
| Rueck's blue flycatcher    | <i>Muscicapa ruekci</i>                |                       |                  |                    |          |
| White-breasted silveryeye  | <i>Zosterops albogularis</i>           |                       |                  |                    |          |
| Red siskin                 | <i>Spinus cucullatus</i>               |                       |                  |                    |          |
| Yellow-faced siskin        | <i>Spinus yarrellii</i>                |                       |                  |                    |          |
| Island loggerhead shrike   | <i>Lanius ludovicianus mearnsi</i>     |                       |                  |                    | NC       |
| San Clemente sage sparrow  | <i>Amphispiza belli clementae</i>      |                       |                  |                    | NC       |

Note.—NC = Noncontroversial.

**REPTILES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS**

| Common name                            | Scientific name                                   | Controversial         |                  | On con-<br>vention | Comments |
|--|---|-----------------------|------------------|--------------------|----------|
|  |   | Commercial<br>reasons | Other<br>reasons |                    |          |
| Chinese alligator                      | <i>Alligator sinensis</i>                         |                       |                  | X                  | NC       |
| Black caiman                           | <i>Melanosuchus niger</i>                         |                       |                  | X                  | NC       |
| Common caiman                          | <i>Caiman crocodilus crocodilus</i>               | X                     |                  | X                  |          |
| Brown caiman                           | <i>Caiman crocodilus fuscus</i>                   |                       |                  | X                  | NC       |
| Apaoris River caiman                   | <i>Caiman crocodilus apaoriensis</i>              |                       |                  | X                  | NC       |
| Broad-snouted caiman                   | <i>Caiman latirostris</i>                         |                       |                  | X                  | NC       |
| Dwarf caiman                           | <i>Paleosuchus palpebrosus</i>                    |                       |                  | X                  | NC       |
| Smooth-fronted caiman                  | <i>Paleosuchus trigonatus</i>                     |                       |                  | X                  | NC       |
| Tomistoma                              | <i>Tomistoma schlegelii</i>                       |                       |                  | X                  | NC       |
| African dwarf crocodile                | <i>Osteoleaemus tetraspis tetraspis</i>           |                       |                  | X                  | NC       |
| Congo dwarf crocodile                  | <i>Osteoleaemus tetraspis osborni</i>             |                       |                  | X                  | NC       |
| Johnson's crocodile                    | <i>Crocodylus johnsoni</i>                        |                       |                  | X                  | NC       |
| New Guinea crocodile                   | <i>Crocodylus novaeguineae novae-<br/>guineae</i> |                       |                  | X                  | NC       |
| Salt water crocodile                   | <i>Crocodylus porosus</i>                         |                       |                  | X                  | NC       |
| African slender-snouted croc-<br>odile | <i>Crocodylus cataphractus</i>                    |                       |                  | X                  | NC       |
| Siamese crocodile                      | <i>Crocodylus siamensis</i>                       |                       |                  | X                  | NC       |
| Mugger crocodile                       | <i>Crocodylus palustris palustris</i>             |                       |                  | X                  | NC       |
| Ceylon mugger crocodile                | <i>Crocodylus palustris kimbula</i>               |                       |                  | X                  | NC       |
| Philippine crocodile                   | <i>Crocodylus novaeguineae mindorensis</i>        |                       |                  | X                  | NC       |
| Muhlenberg turtle                      | <i>Clemmys muhlenbergi</i>                        |                       |                  | X                  | NC       |
| Spotted pond turtle                    | <i>Geoclemmys (-Damonina) hamiltonii</i>          |                       |                  | X                  | NC       |
| Three-keeled Asian turtle              | <i>Geomyda (-Nicatoria) tricarinata</i>           |                       |                  | X                  | NC       |
| Indian sawback turtle                  | <i>Kachuga tecta tecta</i>                        |                       |                  | X                  | NC       |
| Burmese peacock turtle                 | <i>Morenia ocellata</i>                           |                       |                  | X                  | NC       |
| Bow-sprit tortoises                    | <i>Chersine spp</i>                               |                       |                  | X                  | NC       |
| Land tortoises                         | <i>Geochelone spp</i>                             |                       |                  | X                  | NC       |
| Gopher tortoises                       | <i>Gopherus spp</i>                               |                       |                  | X                  | NC       |
|  | <i>Homopus spp</i>                                |                       |                  | X                  | NC       |
| Hinged-back tortoises                  | <i>Kinixys spp</i>                                |                       |                  | X                  | NC       |
| Pancake tortoises                      | <i>Malacochersus spp</i>                          |                       |                  | X                  | NC       |
| Madagascar spider tortoises            | <i>Pyxis spp</i>                                  |                       |                  | X                  | NC       |
| Land tortoises                         | <i>Testudo spp</i>                                |                       |                  | X                  | NC       |
| Loggerhead sea turtle                  | <i>Caretta caretta</i>                            | X                     |                  | X                  |          |
| Green sea turtle                       | <i>Chelonia mydas</i>                             | X                     |                  | X                  |          |
| Flat-back sea turtle                   | <i>Chelonia depressa</i>                          | X                     |                  | X                  |          |
| Pacific Ridley sea turtle              | <i>Lepidochelys olivacea</i>                      | X                     |                  | X                  |          |
| Indian flap-shell tortoise             | <i>Lissemys punctata punctata</i>                 |                       |                  | X                  | NC       |
| Cuartro Cienegas softshell<br>turtle   | <i>Trionyx ater</i>                               |                       |                  | X                  | NC       |
| Black softshell turtle                 | <i>Trionyx nigricans</i>                          |                       |                  | X                  | NC       |
| Indian softshell turtle                | <i>Trionyx gangeticus</i>                         |                       |                  | X                  | NC       |
| Peacock softshell turtle               | <i>Trionyx nukum</i>                              |                       |                  | X                  | NC       |
| South American river turtle            | <i>Podocnemis spp</i>                             |                       |                  | X                  | NC       |
| Orange-throated whiptail               | <i>Cnemidophorus hyperythrus</i>                  |                       |                  | X                  | NC       |
| Galapagos land iguana                  | <i>Cololophus subcristatus</i>                    |                       |                  | X                  | NC       |
| Galapagos marine iguana                | <i>Amblyrhynchus cristatus</i>                    |                       |                  | X                  | NC       |

**REPTILES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name              | Scientific name                          | Controversial         |                  | On con-<br>vention | Comments |
|--------------------------|--|-----------------------|------------------|--------------------|----------|
|                          |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| San Diego horned lizard  | <i>Phrynosoma coronatum blainvilliei</i> |                       |                  | X                  | NC       |
| Gila monster             | <i>Heloderma suspectum</i>               | X                     |                  | X                  |          |
| Beaded lizard            | <i>Heloderma horridum</i>                | X                     |                  | X                  |          |
| Monitor lizards          | <i>Varanus</i> spp.                      |                       |                  | X                  | NC       |
| Indian python            | <i>Python molurus molurus</i>            |                       |                  | X                  | NC       |
| Rainbow boa              | <i>Epicrates cenchris cenchris</i>       |                       |                  | X                  | NC       |
| Yellow anaconda          | <i>Eunectes notaeus</i>                  |                       |                  | X                  | NC       |
| Boa constrictor          | <i>Constrictor constrictor</i>           | X                     |                  | X                  |          |
| Pythons                  | <i>Python</i> spp.                       |                       |                  | X                  |          |
|                          | <i>Cyclagras gigas</i>                   |                       |                  | X                  | NC       |
| Mussurana                | <i>Pseudoboa cloelia</i>                 |                       |                  | X                  | NC       |
| Indian egg-eater         | <i>Elaschistodon westermanni</i>         |                       |                  | X                  | NC       |
| Two-striped garter snake | <i>Thamnophis elegans hammondi</i>       |                       |                  | X                  | NC       |

Note.—NC=Noncontroversial.

**AMPHIBIANS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS**

| Common name               | Scientific name  | Controversial         |                  | On con-<br>vention | Comments |
|---------------------------|--|-----------------------|------------------|--------------------|----------|
|                           |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Axolotl                   | <i>Ambystoma mexicanum</i>   |                       |                  | X                  | NC       |
| Lake Patzcuaro salamander | <i>Ambystoma dumerilii</i>   |                       |                  | X                  | NC       |
| Lake Lerma salamander     | <i>Ambystoma lermaensis</i>  |                       |                  | X                  | NC       |
| Japanese giant salamander | <i>Andrias (= Megalobatrachus) davidi-</i><br><i>anus japonicus</i>  |                       |                  | X                  | NC       |
| Chinese giant salamander  | <i>Andrias (= Megalobatrachus) davidi-</i><br><i>anus davidianus</i> |                       |                  | X                  | NC       |
| Sonoran greed toad        | <i>Bufo retiformis</i>   |                       |                  | X                  | NC       |
| Cameroon toad             | <i>Bufo superciliaris</i>  |                       |                  | X                  | NC       |
| Monteverde toad           | <i>Bufo periglenes</i>   |                       |                  | X                  | NC       |
| African viviparous toads  | <i>Nectophrynoides</i> sp.   |                       |                  | X                  | NC       |
| Panamanian golden frog    | <i>Atelopus varius zeteki</i>  |                       |                  | X                  | NC       |
| Red Hills salamander      | <i>Phaeognathus hubrichti</i>  |                       |                  |                    | NC       |

Note.—NC=Noncontroversial.

**MOLLUSKS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS**

| Common name                            | Scientific name                 | Controversial         |                  | On con-<br>vention | Comments |
|--|---------------------------------|-----------------------|------------------|--------------------|----------|
|  |                                 | Commercial<br>reasons | Other<br>reasons |                    |          |
| Canclo Cienega fontelicella            | <i>Fontelicella</i> , n. sp.    |                       |                  |                    | NC       |
| Fossil Springs fontelicella            | do.                             |                       |                  |                    | NC       |
| Huachuca fontelicella                  | do.                             |                       |                  |                    | NC       |
| Monkey Spring fontelicella             | do.                             |                       |                  |                    | NC       |
| Montezuma Well fontelicella            | do.                             |                       |                  |                    | NC       |
| Page Springs fontelicella              | do.                             |                       |                  |                    | NC       |
| San Bernardino Ranch fonteli-<br>cella | do.                             |                       |                  |                    | NC       |
| Tavasci Spring fontelicella            | do.                             |                       |                  |                    | NC       |
| Verde Rim fontelicella                 | do.                             |                       |                  |                    | NC       |
| Bylas tryonia                          | <i>Tryonia</i> , n. sp.         |                       |                  |                    | NC       |
| Burn's Spring tryonia                  | do.                             |                       |                  |                    | NC       |
| Father Kino's tryonia                  | do.                             |                       |                  |                    | NC       |
| Littlefield Springs hydrobiid          | n. gen., n. sp.                 |                       |                  |                    | NC       |
| Three Forks hydrobiid                  | do.                             |                       |                  |                    | NC       |
| Badwater assiminea                     | <i>Assiminea infirma</i>        |                       |                  |                    | NC       |
| Ash Meadows assiminea                  | <i>Assiminea</i> , n. sp.       |                       |                  |                    | NC       |
| Amargosa fontelicella                  | <i>Fontelicella micrococcus</i> |                       |                  |                    | NC       |
| Deep Springs Valley fontelicella       | <i>Fontelicella</i> , n. sp.    |                       |                  |                    | NC       |
| Fish Slough fontelicella               | do.                             |                       |                  |                    | NC       |
| Hanaupah Canyon fontelicella           | do.                             |                       |                  |                    | NC       |
| Owens Valley fontelicella              | do.                             |                       |                  |                    | NC       |
| Scotty's Castle fontelicella           | do.                             |                       |                  |                    | N        |
| Scotty's Ranch fontelicella            | do.                             |                       |                  |                    | NC       |
| Scotty's Ranch tryonia                 | <i>Tryonia</i> , n. sp.         |                       |                  |                    | NC       |
| Adobe Valley hydrobiid                 | n. gen., n. sp.                 |                       |                  |                    | NC       |

MOLLUSKS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued

| Common name                        | Scientific name                        | Controversial         |                  | On con-<br>vention | Comments |
|------------------------------------|--|-----------------------|------------------|--------------------|----------|
|                                    |  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Travertine Springs hydrobiid       | do                                     |                       |                  |                    | NC       |
| Overton assiminea                  | Assiminea, n. sp.                      |                       |                  |                    | NC       |
| Muddy (= Moapa) Valley turban      | "Fluminicola" aernalis                 |                       |                  |                    | NC       |
| Ash Meadows turban                 | "Fluminicola" erythropoma              |                       |                  |                    | NC       |
| Pahrnaget Valley turban            | "Fluminicola" merriami                 |                       |                  |                    | NC       |
| Hot Creek turban                   | "Fluminicola", n. sp.                  |                       |                  |                    | NC       |
| Red Rock fontelicella              | do                                     |                       |                  |                    | NC       |
| White River Valley fontelicella    | do                                     |                       |                  |                    | NC       |
| White River tryonia                | Tryonia clathrata                      |                       |                  |                    | NC       |
| Ash Meadows tryonia                | Tryonia, n. sp.                        |                       |                  |                    | NC       |
| White River Valley hydrobiid       | n. gen., n. sp.                        |                       |                  |                    | NC       |
| Socorro hydrobiid                  | Amnicola neomexicana                   |                       |                  |                    | NC       |
| Blue Spring fontelicella           | Fontelicella, n. sp.                   |                       |                  |                    | NC       |
| Roswell fontelicella               | do                                     |                       |                  |                    | NC       |
| Roswell tryonia                    | Tryonia, n. sp.                        |                       |                  |                    | NC       |
| Diamond-Y (Wilbank) assiminea      | Assiminea, n. sp.                      |                       |                  |                    | NC       |
| Phantom Spring cochliopa           | Cochliopa texana                       |                       |                  |                    | NC       |
| Phantom Spring tryonia             | Tryonia cheatumi                       |                       |                  |                    | NC       |
| Diamond-Y (Wilbank) Spring tryonia | Tryonia, n. sp.                        |                       |                  |                    | NC       |
| Diamond-Y (Wilbank) pond snail     | Physa virgata bottomeri                |                       |                  |                    | NC       |
| St. George hydrobiid               | Amnicola deserta                       |                       |                  |                    | NC       |
| Zion Canyon physa                  | Physa zioni                            |                       |                  |                    | NC       |
|                                    | Quadrula stapes                        |                       | X                |                    |          |
|                                    | Pleurobema curtum                      |                       | X                |                    |          |
|                                    | Pleurobema perovatium                  |                       | X                |                    |          |
|                                    | Pleurobema marshalli                   |                       | X                |                    |          |
|                                    | Pleurobema taiianum                    |                       | X                |                    |          |
|                                    | Pleurobema decium                      |                       | X                |                    |          |
|                                    | Epioblasma penita                      |                       | X                |                    |          |
|                                    | Alasmidonta arcula                     |                       |                  |                    | NC       |
|                                    | Alasmidonta triangulata                |                       |                  |                    | NC       |
|                                    | Alasmidonta varicosa                   |                       |                  |                    | NC       |
|                                    | Elliptio (Canthytia) spinosa           |                       |                  |                    | NC       |
|                                    | Elliptio (Elliptio) fraterna           |                       |                  |                    | NC       |
|                                    | Elliptio (Elliptio) shepardiana        |                       |                  |                    | NC       |
|                                    | Elliptio (Elliptio) waccamawensis      |                       |                  |                    | NC       |
|                                    | Elliptioideus sloatianus               |                       |                  |                    | NC       |
|                                    | Fusconia escambia                      |                       |                  |                    | NC       |
|                                    | Lampsilis dolabraeformis               |                       |                  |                    | NC       |
|                                    | Lampsilis haddletoni                   |                       |                  |                    | NC       |
|                                    | Medionidus penicillatus                |                       |                  |                    | NC       |
|                                    | Megalonaia neisleri                    |                       |                  |                    | NC       |
|                                    | Pleurobema (Pleurobema) pyriforme      |                       |                  |                    | NC       |
|                                    | Ptychobranchus jonesi                  |                       |                  |                    | NC       |
|                                    | Quincuncina burkei                     |                       |                  |                    | NC       |
|                                    | Villosa australis                      |                       |                  |                    | NC       |
|                                    | Villosa choctawensis                   |                       |                  |                    | NC       |
|                                    | Anodonta suborbiculata                 |                       |                  |                    | NC       |
|                                    | Glebulula rotundata                    |                       |                  |                    | NC       |
|                                    | Margaritifera hembeli                  |                       |                  |                    | NC       |
|                                    | Megalonaia gigantea                    |                       |                  |                    | NC       |
|                                    | Pleurobema (Lexingtonia) masoni        |                       |                  |                    | NC       |
|                                    | Alasmidonta wrightiana                 |                       |                  |                    | NC       |
|                                    | Elliptio (Elliptio) crassidens downiei |                       |                  |                    | NC       |
|                                    | Elliptio (Elliptio) nigella            |                       |                  |                    | NC       |
|                                    | Lampsilis binominatus                  |                       |                  |                    | NC       |
|                                    | Obovaria rotulata                      |                       |                  |                    | NC       |
|                                    | Goniobasis clenchi                     |                       |                  |                    | NC       |
|                                    | Somatogyrus                            |                       |                  |                    | NC       |
|                                    | Goniobasis boykineana                  |                       |                  |                    | NC       |
|                                    | Goniobasis catenoides                  |                       |                  |                    | NC       |
|                                    | Goniobasis viennaensis                 |                       |                  |                    | NC       |
|                                    | Goniobasis albanensis                  |                       |                  |                    | NC       |
|                                    | Notogillia sathon                      |                       |                  |                    | NC       |
|                                    | Marstonia agarheta                     |                       |                  |                    | NC       |
|                                    | Spilochlamys turgida                   |                       |                  |                    | NC       |
|                                    | Stenotrema pilsbryi                    |                       |                  |                    | NC       |
|                                    | Mesodon clarki nantahala               |                       |                  |                    | NC       |
|                                    | Mesodon magazinensis                   |                       |                  |                    | NC       |
|                                    | Polygyra peregrina                     |                       |                  |                    | NC       |
|                                    | Discus macclintocki                    |                       |                  |                    | NC       |
|                                    | Polygyriscus virginianus               |                       |                  |                    | NC       |
|                                    | Anguispira picta                       |                       |                  |                    | NC       |
|                                    | Triodopsis platysayoides               |                       |                  |                    | NC       |
|                                    | Mesodon jonesianus                     |                       |                  |                    | NC       |
|                                    | Succinea ovalis form chittenangoensis  |                       |                  |                    | NC       |
|                                    | Orthalicus reses                       |                       |                  |                    | NC       |
|                                    | Io armigera                            |                       | X                |                    |          |
|                                    | Io armigera form duttoniana            |                       | X                |                    |          |

**MOLLUSKS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name                                 | Scientific name   | Controversial         |                  | On con-<br>vention | Comments |
|---|---|-----------------------|------------------|--------------------|----------|
|   |   | Commercial<br>reasons | Other<br>reasons |                    |          |
|   | <i>Io armigera</i> form <i>jayana</i> .....   |                       | X                |                    |          |
|   | <i>Io geniculata</i> .....  |                       | X                |                    |          |
|   | <i>Io geniculata</i> form <i>punguis</i> .....                                      |                       | X                |                    |          |
|   | <i>Io verrucosa</i> .....   |                       |                  |                    | NC       |
|   | <i>Io verrucosa</i> form <i>lima</i> .....  |                       |                  |                    | NC       |
|   | <i>Io salebrosa</i> .....   |                       | X                |                    |          |
|   | <i>Io fluviatilis</i> .....   |                       |                  |                    | NC       |
|   | <i>Leptoxis subglobosa</i> form <i>umbilicata</i> .....                             |                       |                  |                    | NC       |
|   | <i>Leptoxis praerosa</i> .....  |                       |                  |                    | NC       |
| Yates' snail.....                           | <i>Ammonitella yatesi</i> .....   |                       | X                |                    |          |
| Slug snail.....                             | <i>Binneya notabilis</i> .....  |                       |                  |                    | NC       |
| Allynsmith's banded snail.....              | <i>Helminthoglypta allynsmithi</i> .....  |                       |                  |                    | NC       |
| Dented Peninsula snail.....                 | <i>Helminthoglypta arrosa miwoka</i> .....  |                       |                  |                    | NC       |
| Nicklin's Peninsula snail.....              | <i>Helminthoglypta nickliniana awania</i> .....                                     |                       |                  |                    | NC       |
| Banded Dune snail.....                      | <i>Helminthoglypta walkeriana</i> .....   |                       |                  |                    | NC       |
| Fraternal snail.....                        | <i>Micrariaonta feralis</i> .....   |                       |                  |                    | NC       |
| Cathedral snail.....                        | <i>Micrariaonta indioensis cathedralis</i> .....                                    |                       |                  |                    | NC       |
| Colorado Desert Snail.....                  | <i>Micrariaonta morongoana</i> .....  |                       |                  |                    | NC       |
| California McCoy Snail.....                 | <i>Micrariaonta rowelli mccoiana</i> .....  |                       |                  |                    | NC       |
| Tryon's Snail.....                          | <i>Micrariaonta tryoni</i> .....  |                       |                  |                    | NC       |
| Rocky Coast Snail.....                      | <i>Monadenia fidelis promotis</i> .....   |                       |                  |                    | NC       |
| Indian Yosemite Snail.....                  | <i>Monadenia hillebrandi yosemitensis</i> .....                                     |                       |                  |                    | NC       |
| California Northern River Snail.....        | <i>Monadenia setosa</i> .....   |                       |                  |                    | NC       |
| Karok Indian Snail.....                     | <i>Vespericola karokorum</i> .....  |                       |                  |                    | NC       |
| California Brackish Water Snail.....        | <i>Tryonia imitator</i> .....   |                       |                  |                    | NC       |
| Wheeler's Pearly Mussel.....                | <i>Arkansia wheeleri</i> .....  |                       | X                |                    |          |
| Birdwing Pearly Mussel.....                 | <i>Conradia caeiata</i> .....   |                       | X                | X                  |          |
| Spectacle Case Pearly Mussel.....           | <i>Cumberlandia monodonta</i> .....   |                       | X                |                    |          |
| Dromedary Pearly Mussel.....                | <i>Dromus dromas</i> .....  |                       |                  | X                  | NC       |
| Curtis' Pearly Mussel.....                  | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>florentina</i><br><i>curtisi</i> .....    |                       |                  | X                  | NC       |
| Yellow-Blossom Pearly Mussel.....           | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>florentina</i><br><i>flarentsna</i> ..... |                       | X                | X                  |          |
| Acorn Pearly Mussel.....                    | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>haysiana</i> .....                        |                       |                  |                    | NC       |
| Lefevre's Pearly Mussel.....                | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>lefevrei</i> .....                        |                       |                  | X                  | NC       |
| Sampson's Pearly Mussel.....                | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>sampsoni</i> .....                        |                       |                  |                    | NC       |
| White Cat's Paw Pearly Mussel.....          | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>sulcata</i><br><i>perobliqua</i> .....    |                       |                  | X                  | NC       |
| Purple Cat's Paw Pearly Mussel.....         | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>sulcata</i><br><i>sulcata</i> .....       |                       |                  | X                  | NC       |
| Green-Blossom Pearly Mussel.....            | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>torulosa</i><br><i>gubernaculum</i> ..... |                       |                  | X                  | NC       |
| Tubereuled-Blossom Pearly Mussel.....       | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>torulosa</i><br><i>torulosa</i> .....     |                       |                  | X                  | NC       |
| Turgid-Blossom Pearly Mussel.....           | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>turgidula</i> .....                       |                       | X                | X                  |          |
| Fine-Rayed Pigtoe Pearly.....               | <i>Fusconia cumeolus</i> .....  |                       |                  | X                  | NC       |
| Shiny Pigtoe Pearly Mussel.....             | <i>Fusconia edgariana</i> .....   |                       |                  | X                  | NC       |
| Higgins' Eye Pearly Mussel.....             | <i>Lampsilis higginsii</i> .....  |                       | X                | X                  |          |
| Pink Mucket Pearly Mussel.....              | <i>Lampsilis orbiculata orbiculata</i> .....  |                       |                  | X                  | NC       |
| Neosho Pearly Mussel.....                   | <i>Lampsilis rafinesqueana</i> .....  |                       |                  | X                  | NC       |
| Alabama Lamp Pearly Mussel.....             | <i>Lampsilis virescens</i> .....  |                       |                  | X                  | NC       |
| Scale Pearly Mussel.....                    | <i>Leptodea leptodon</i> .....  |                       | X                |                    |          |
| Golf Stick Pearly Mussel.....               | <i>Obovaria retussa</i> .....   |                       |                  |                    | NC       |
| Little-winged Pearly Mussel.....            | <i>Pegias fabula</i> .....  |                       |                  |                    | NC       |
| White Wartback Pearly Mussel.....           | <i>Plethobasis cicatricosus</i> .....   |                       |                  |                    | NC       |
| Orange-footed Pimpleback Pearly Mussel..... | <i>Plethobasis cooperianus</i> .....  |                       | X                | X                  |          |
| Rough Pigtoe Pearly Mussel.....             | <i>Pleurobema plenum</i> .....  |                       |                  | X                  | NC       |
| Fat Pocketbook Pearly Mussel.....           | <i>Potamilus</i> (= <i>Proptera</i> ) <i>capax</i> .....                            |                       |                  | X                  | NC       |
| Rough Rabbits Foot Pearly Mussel.....       | <i>Quadrula cylindrica strigillata</i> .....  |                       |                  |                    | NC       |
| Rough Maple Leaf Pearly Mussel.....         | <i>Quadrula fragosa</i> .....   |                       | X                |                    |          |
| Cumberland Monkey Face Pearly Mussel.....   | <i>Quadrula intermedia</i> .....  |                       | X                | X                  |          |
| Appalachian Monkey Face Pearly Mussel.....  | <i>Quadrula sparsa</i> .....  |                       |                  | X                  | NC       |
| Pale Lilliput Pearly Mussel.....            | <i>Toxolasma</i> (= <i>Carunculina</i> ) <i>cylindrella</i> .....                   |                       | X                | X                  |          |
| Ortman's Pearly Mussel.....                 | <i>Villosa</i> (= <i>Micromya</i> ) <i>ortmani</i> .....                            |                       |                  |                    | NC       |
| Fine-rayed Purple Pearly Mussel.....        | <i>Villosa</i> (= <i>Micromya</i> ) <i>perpurpurea</i> .....                        |                       |                  |                    | NC       |
| Cumberland Bean Pearly Mussel.....          | <i>Villosa</i> (= <i>Micromya</i> ) <i>trabilis</i> .....                           |                       |                  | X                  | NC       |
| Edible Pearly Mussel.....                   | <i>Cyporogenia aberti</i> .....   |                       |                  |                    | NC       |
| Tan-blossom Pearly Mussel.....              | <i>Epioblasma</i> (= <i>Dysnomia</i> ) <i>torulosa</i><br><i>rangiana</i> .....     |                       |                  |                    | NC       |
| Long Solid.....                             | <i>Fusconia subrotunda</i> .....  |                       |                  |                    | NC       |
| Ozark Lamp Pearly Mussel.....               | <i>Lampsilis brevicula</i> .....  |                       |                  |                    | NC       |
| Slab-sided Pearly Mussel.....               | <i>Lexingtonia dolabelloides</i> .....  |                       | X                |                    |          |
| Club Pearly Mussel.....                     | <i>Pleurobema clava</i> .....   |                       |                  |                    | NC       |
| Manus Island Tree Snail.....                | <i>Papustyla</i> (= <i>Papuina</i> ) <i>pulcherrima</i> .....                       |                       |                  |                    | NC       |
| New Zealand Amber Snail.....                | <i>Paraphanta</i> spp.....  |                       |                  |                    | NC       |

**MOLLUSKS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS—Continued**

| Common name                                   | Scientific name                | Controversial         |                  | On con-<br>vention | Comments |
|---|--------------------------------|-----------------------|------------------|--------------------|----------|
|   |                                | Commercial<br>reasons | Other<br>reasons |                    |          |
| Coahuilix de Hubbs Snail.....                 | Coahuilix hubbsi.....          |                       |                  |                    | NC       |
| Cochilipina de Miller Snail.....              | Cochilipina milleri.....       |                       |                  |                    | NC       |
| Durangonella de Coahuila Snail.....           | Durangonella coahuilae.....    |                       |                  |                    | NC       |
| Mexipyrigus de Carranza Snail.....            | Mexipyrigus carranzae.....     |                       |                  |                    | NC       |
| Mexipyrigus de Churince Snail.....            | Mexipyrigus churinceanus.....  |                       |                  |                    | NC       |
| Mexipyrigus de Escobeda Snail.....            | Mexipyrigus escobedae.....     |                       |                  |                    | NC       |
| Mexipyrigus de Lugo Snail.....                | Mexipyrigus lugoi.....         |                       |                  |                    | NC       |
| Mexipyrigus de West El Mojarral<br>Snail..... | Mexipyrigus multilineatus..... |                       |                  |                    | NC       |
| Mexithauma de Cuatro Ciénegas<br>Snail.....   | Mexithauma quadripaludium..... |                       |                  |                    | NC       |
| Nymphophilus de Minckley<br>Snail.....        | Nymphophilus minckleyi.....    |                       |                  |                    | NC       |
| Paludiscala de Oro Snail.....                 | Paludiscala caramba.....       |                       |                  |                    | NC       |

Note.—NC = Noncontroversial.

**CRUSTACEANS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS**

| Common name                    | Scientific name              | Controversial         |                  | On con-<br>vention | Comments |
|--------------------------------|------------------------------|-----------------------|------------------|--------------------|----------|
|                                |                              | Commercial<br>reasons | Other<br>reasons |                    |          |
| Scud.....                      | Allocrangonyx hubrichti..... |                       | X                |                    | NC       |
| Do.....                        | Apocrangonyx araeus.....     |                       |                  |                    | NC       |
| Do.....                        | Apocrangonyx lucifugus.....  |                       |                  |                    | NC       |
| Norton's cave scud.....        | Apocrangonyx nortoni.....    |                       |                  |                    | NC       |
| Diminutive scud.....           | Gammarus sp.....             |                       |                  |                    | NC       |
| Noel's scud.....               | do.....                      |                       |                  |                    | NC       |
| Bousfield's scud.....          | Gammarus bousfieldi.....     |                       |                  |                    | NC       |
| Pecos scud.....                | Gammarus pecos.....          |                       |                  |                    | NC       |
| Texas cave shrimp.....         | Palaemonetes antrorum.....   |                       |                  |                    | NC       |
| Florida cave shrimp.....       | Palaemonetes cummingsi.....  |                       |                  |                    | NC       |
| Alabama cave shrimp.....       | Palaemonetes alabamiae.....  |                       |                  |                    | NC       |
| Kentucky cave shrimp.....      | Palaemonetes gantieri.....   |                       |                  |                    | NC       |
| Palm Springs cave shrimp.....  | Procambarus agerontis.....   |                       |                  |                    | NC       |
| Scud.....                      | Stygobromus heteropodus..... |                       |                  |                    | NC       |
| Do.....                        | Stygobromus hubbsi.....      |                       |                  |                    | NC       |
| Do.....                        | Stygobromus smithi.....      |                       |                  |                    | NC       |
| Balcone's cave scud.....       | Stygonectes balconis.....    |                       |                  |                    | NC       |
| Bowman's cave scud.....        | Stygonectes bowmani.....     |                       |                  |                    | NC       |
| Cooper's cave scud.....        | Stygonectes cooperi.....     |                       |                  |                    | NC       |
| Scud.....                      | Stygonectes dejectus.....    |                       |                  |                    | NC       |
| Do.....                        | Stygonectes elatus.....      |                       |                  |                    | NC       |
| Do.....                        | Stygonectes emarginatus..... |                       |                  |                    | NC       |
| Do.....                        | Stygonectes flagellatus..... |                       |                  |                    | NC       |
| Do.....                        | Stygonectes hadenoecus.....  |                       |                  |                    | NC       |
| Do.....                        | Stygonectes longipes.....    |                       |                  |                    | NC       |
| Mountain cave scud.....        | Stygonectes montanus.....    |                       |                  |                    | NC       |
| Morrison's cave scud.....      | Stygonectes morrisoni.....   |                       |                  |                    | NC       |
| Scud.....                      | Stygonectes reddelli.....    |                       |                  |                    | NC       |
| Spring cave scud.....          | Stygonectes spinatus.....    |                       |                  |                    | NC       |
| Scud.....                      | Stygonectes tenuis.....      |                       |                  |                    | NC       |
| Texas scud.....                | Hyalella texana.....         |                       |                  |                    | NC       |
| California shrimp.....         | Syncaris pacifica.....       |                       |                  |                    | NC       |
| Obeys crayfish.....            | Cambarus obeyensis.....      |                       |                  |                    | NC       |
| Big South Fork crayfish.....   | Cambarus bouchardi.....      |                       |                  |                    | NC       |
| Florida cave scud.....         | Crangonyx grandimanus.....   |                       |                  |                    | NC       |
| New River crayfish.....        | Cambarus chasmodactylus..... |                       | X                |                    | NC       |
| Madison cave isopod.....       | Antrolana lira.....          |                       |                  |                    | NC       |
| Ephemeral cave scud.....       | Apocrangonyx ephemerus.....  |                       |                  |                    | NC       |
| Minute cave scud.....          | Apocrangonyx parvus.....     |                       |                  |                    | NC       |
| Pennsylvania cave scud.....    | Crangonyx dearolii.....      |                       |                  |                    | NC       |
| Burnsville Cove cave scud..... | Stygonectes conradi.....     |                       |                  |                    | NC       |
| Hay's Spring scud.....         | Stygonectes hayi.....        |                       |                  |                    | NC       |
| Tidewater scud.....            | Stygonectes indentatus.....  |                       |                  |                    | NC       |
| Bath County cave scud.....     | Stygonectes mundus.....      |                       |                  |                    | NC       |
| Pizzini's scud.....            | Stygonectes pizzinii.....    |                       |                  |                    | NC       |
| Stellmack's cave scud.....     | Stygonectes stellmacki.....  |                       |                  |                    | NC       |

Note.—NC = Noncontroversial.

## PICES—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS

| Common name               | Scientific name                  | Controversial         |                  | On con-<br>vention | Comments |
|---------------------------|----------------------------------|-----------------------|------------------|--------------------|----------|
|                           |                                  | Commercial<br>reasons | Other<br>reasons |                    |          |
| Spotfin chub              | Hybopsis monacha                 |                       |                  |                    | NC       |
| Bluestripe shiner         | Notropis callitænia              |                       |                  |                    | NC       |
| Colorless shiner          | Notropis perpalidus              |                       |                  |                    | NC       |
| Cape Fear shiner          | Notropis mekistocholas           |                       |                  |                    | NC       |
| Rustyside sucker          | Moxostoma hamiltoni              |                       |                  |                    | NC       |
| Orangefin madtom          | Noturus gilberti                 |                       |                  |                    | NC       |
| Quachita madtom           | Noturus fahneri                  |                       |                  |                    | NC       |
| Frecklebelly madtom       | Noturus munitus                  |                       |                  |                    | NC       |
| Caddo madtom              | Noturus taylori                  |                       |                  |                    | NC       |
| Alabama cavefish          | Speoplatyrhinus poulsoni         |                       |                  |                    | NC       |
| Whiteline topminnow       | Fundulus albolineatus            |                       |                  |                    | NC       |
| Waccamaw killifish        | Fundulus waccamensis             |                       |                  |                    | NC       |
| Waccamaw silverside       | Menidia extensa                  |                       |                  |                    | NC       |
| Crystal darter            | Ammocrypta asprella              |                       |                  |                    | NC       |
| Eastern sand darter       | Ammocrypta pellucida             |                       |                  |                    | NC       |
| Slackwater darter         | Etheostoma boschungii            |                       |                  |                    | NC       |
| Coldwater darter          | Etheostoma ditrema               |                       |                  |                    | NC       |
| Yellowcheek darter        | Etheostoma moorei                |                       |                  |                    | NC       |
| Paleback darter           | Etheostoma pallididorsum         |                       |                  |                    | NC       |
| Waccamaw darter           | Etheostoma perlongum             |                       |                  |                    | NC       |
| Sharphead darter          | Etheostoma acuticeps             |                       |                  |                    | NC       |
| Trispot darter            | Etheostoma trisella              |                       |                  |                    | NC       |
| Tuscumbia darter          | Etheostoma tuscumbia             |                       |                  |                    | NC       |
| Golubine darter           | Percina aurolineata              |                       |                  |                    | NC       |
| Snail darter              | Percina (imostoma) sp.           |                       | ×                |                    |          |
| Freckled darter           | Percina lenticula                |                       |                  |                    | NC       |
| Longhead darter           | Percina macrocephala             |                       |                  |                    | NC       |
| Leopard darter            | Percina pantherina               |                       |                  |                    | NC       |
| Roanoke logperch          | Percina rex                      |                       |                  |                    | NC       |
| Pygmy sculpin             | Cottus pygmaeus                  |                       |                  |                    | NC       |
| Lake sturgeon             | Acipenser fulvescens             |                       |                  | ×                  | NC       |
| Baltic sturgeon           | Acipenser sturio                 |                       |                  | ×                  | NC       |
| Arapaima                  | Arapaima gigas                   |                       |                  | ×                  | NC       |
| Asiatic bonytongue        | Scleropages formosus             |                       |                  | ×                  | NC       |
| Beloribitsa               | Stenodus leucichthys leucichthys |                       |                  | ×                  | NC       |
| Mexican golden trout      | Salmo chrysogaster               |                       |                  | ×                  | NC       |
| Ikan temolek              | Probarus jullieni                |                       |                  | ×                  | NC       |
| Annual tropical killifish | Cynolebias constanciae           |                       |                  | ×                  | NC       |
| Do                        | Cynolebias marmoratus            |                       |                  | ×                  | NC       |
| Do                        | Cynolebias minimus               |                       |                  | ×                  | NC       |
| Do                        | Cynolebias opalescens            |                       |                  | ×                  | NC       |
| Do                        | Cynolebias splendens             |                       |                  | ×                  | NC       |
| Monterey platyfish        | Xiphophorus couchianus           |                       |                  | ×                  | NC       |
| Coelacanth                | Latimeria chalumnae              |                       |                  | ×                  | NC       |
| Australian lungfish       | Neoceratodus fosteri             |                       |                  | ×                  | NC       |

Note.—NC = Noncontroversial.

## INSECTS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LISTS

| Common name                    | Scientific name               | Controversial         |                  | On<br>convention | Comments                |
|--------------------------------|-------------------------------|-----------------------|------------------|------------------|-------------------------|
|                                |                               | Commercial<br>reasons | Other<br>reasons |                  |                         |
| Apollo parnassian              | Parnassius apollo             |                       |                  |                  | In com-<br>merce;<br>NC |
| Strohbeen's parnassian         | Parnassius clodius strohbenni |                       |                  |                  | NC                      |
| Bahaman swallowtail            | Papilio andraemon bonhotiei   |                       |                  |                  | NC                      |
| Schaus' swallowtail            | Papilio aristodemus ponceanus |                       |                  |                  | NC                      |
| Catalina orange-tip            | Anthocharis cethura catalina  |                       |                  |                  | NC                      |
| Andrew's marble                | Euchloe hyantis andrewsi      |                       |                  |                  | NC                      |
| Dina's yellow                  | Eurema dina dina              |                       |                  |                  | NC                      |
| Mitchell's satyr               | Euptychia mitchellii          |                       |                  |                  | NC                      |
| Mead's satyr                   | Cercyonis meadii elamosa      |                       |                  |                  | NC                      |
| Chryxus arctic                 | Oeneis chryxus valerata       |                       |                  |                  | NC                      |
| Great Basin silverspot         | Speyeria nokomis nokomis      |                       |                  |                  | NC                      |
| Apache silverspot              | Speyeria nokomis apacheana    |                       |                  |                  | NC                      |
| Mountain silverspot            | Speyeria nokomis nctocris     |                       |                  |                  | NC                      |
| Blue silverspot                | Speyeria nokomis caerulea     |                       |                  |                  | NC                      |
| Myrtle's silverspot            | Speyeria zerene myrtleae      |                       |                  |                  | NC                      |
| Hippolyta                      | Speyeria zerene hippolyta     |                       |                  |                  | NC                      |
| Unsilvered fritillary          | Speyeria adiaeste adiaeste    |                       |                  |                  | NV                      |
| Clemence's fritillary          | Speyeria adiaeste clemencei   |                       |                  |                  | NC                      |
| Atossa fritillary              | Speyeria adiaeste atossa      |                       |                  |                  | NC                      |
| Techachapi mountain silverspot | Speyeria eglesis tehachapina  |                       |                  |                  | NC                      |



**INSECTS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES  
LISTS—Continued**

| Common name                     | Scientific name                               | Controversial         |                  | On con-<br>vention | Comments |
|---------------------------------|---|-----------------------|------------------|--------------------|----------|
|                                 |   | Commercial<br>reasons | Other<br>reasons |                    |          |
| Wright's checkerspot.....       | <i>Euphydryas editha wrighti</i> .....        |                       |                  |                    | NC       |
| Mono checkerspot.....           | <i>Euphydryas editha monoensis</i> .....      |                       |                  |                    | NC       |
| Minute checkerspot.....         | <i>Poladyras minuta</i> .....                 |                       |                  |                    | NC       |
| Obsolete viceroy.....           | <i>Limenitis archippus obsoletus</i> .....    |                       |                  |                    | NC       |
| Atala.....                      | <i>Eumaeus atala florida</i> .....            |                       |                  |                    | NC       |
| San Bruno elfin.....            | <i>Callophrys mossii bayensis</i> .....       |                       |                  |                    | NC       |
| Doudoroff's elfin.....          | <i>Callophrys mossii doudoroffi</i> .....     |                       |                  |                    | NC       |
| Wind's elfin.....               | <i>Callophrys mossii windi</i> .....          |                       |                  |                    | NC       |
| Bog elfin.....                  | <i>Callophrys lanoraieensis</i> .....         |                       |                  |                    | NC       |
| Hessel's hairstreak.....        | <i>Callophrys hesseli</i> .....               |                       |                  |                    | NC       |
| Hawaiian hairstreak.....        | <i>Vaga blackburni</i> .....                  |                       |                  |                    | NC       |
| Clouded tailed copper.....      | <i>Lycaena arota nubila</i> .....             |                       |                  |                    | NC       |
| Karner blue.....                | <i>Lycaeides melissa samuelis</i> .....       |                       |                  |                    | NC       |
| Lotis blue.....                 | <i>Lycaeides argyrognomon lotis</i> .....     |                       |                  |                    | NC       |
| Mission blue.....               | <i>Icaricia icarioides missionensis</i> ..... |                       |                  |                    | NC       |
| Pheres blue.....                | <i>Icaricia icarioides pheres</i> .....       |                       |                  |                    | NC       |
| Moro blue.....                  | <i>Icaricia icarioides moroensis</i> .....    |                       |                  |                    | NC       |
| Smith's blue.....               | <i>Shizamaeoides enoptes smithi</i> .....     |                       |                  |                    | NC       |
| El Segundo blue.....            | <i>Shizamaeoides battoides allyni</i> .....   |                       |                  |                    | NC       |
| Lange's metalmark.....          | <i>Apodemia mormo langei</i> .....            |                       |                  |                    | NC       |
| Maculated manfreda skipper..... | <i>Stallingsia maculosus</i> .....            |                       |                  |                    | NC       |
| Kendall's yucca skipper.....    | <i>Megathymus coloradensis kendalli</i> ..... |                       |                  |                    | NC       |
| Dakota skipper.....             | <i>Hesperia dacotae</i> .....                 |                       |                  |                    | NC       |
| Rare skipper.....               | <i>Problema bulenta</i> .....                 |                       |                  |                    | NC       |
| Salt marsh skipper.....         | <i>Panoquina panoquinoides errans</i> .....   |                       |                  |                    | NC       |
| San Clemente coenonycha.....    | <i>Coenonycha clementina</i> .....            |                       |                  |                    | NC       |

Note.—NC-noncontroversial.

**PLANTS—TAXA UNDER CONSIDERATION FOR PLACEMENT ON ENDANGERED OR THREATENED SPECIES LIST**

| Common name   | Scientific name  | Controversial         |                  | In commerce | Comments  |
|---|------------------|-----------------------|------------------|-------------|---|
|   |                  | Commercial<br>reasons | Other<br>reasons |             |   |
| 2013 Vascular plants in Continental U.S. <sup>1</sup> (including Alaska) (Smithsonian Institution Report—Federal Register notice of review, July 1, 1975).                          | -----            | 5-10                  | 50-100           | 15          |   |
| 1087 Vascular plants in Hawaii <sup>1</sup> (Smithsonian Institution Report—Federal Register notice of review, July 1, 1975).   | -----            |                       | 150-200          |             |   |
| 4 upper Midwest plants (Federal Register notice of review, Apr. 21, 1975).  | -----            |                       | 2                |             |   |
| 62 Vascular plants <sup>3</sup> (app. I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Federal Register notice of review, Sept. 26, 1975). | -----            | 3-6                   |                  | 12-20       | Convention on International Trade is in effect. |
| Cactus family (2000 species) (app. II of Convention on International Trade).  | Cactaceae.....   | 5-10                  | 5-10             | 200-500     |   |
| Orchid family (17,000 species) (app. II of Convention on International Trade).  | Orchidaceae..... | 5-10                  | 5-10             | 400         |   |
| 332 aloe species (app. II of Convention on International Trade).  | Aloe.....        | 2-3                   | 2-3              | 50-60       |   |
| 475 species of succulent euphorbs (app. II of Convention on International Trade).   | Euphorbia.....   | 2-3                   | 2-3              | 150-250     |   |
| 123 other species (app. II of Convention on International Trade).   | -----            | 1-2                   | 1-2              | 25-50       |   |

<sup>1</sup> Here excludes cacti and orchids; see below for conVention treatment.

<sup>2</sup> All numbers in these columns are estimates.

<sup>3</sup> Excluding orchids and aloes.

## PLANTS UNDER CONSIDERATION IN THE OFFICE OF ENDANGERED SPECIES

1. Notice of Review Federal Register 40(77): 17612, 1975 (April 21). 4 upper midwest species
2. Notice of Review Federal Register 40(127, V): 27823-27924, 1975 (July 1). 3,187 U.S. taxa listed by State
3. Listing by plant family on July 1 Notice (as separate circular).
4. Proposed Rulemaking Federal Register 40(188): 44329-44333, 1975 (September 26). 74 plant species, all foreign; entire floral listing of Appendix I, Convention on International Trade in Endangered Species of Wild Fauna and Flora.
5. Supplement to Department of State Publication 8729, General Foreign Policy Series 279, June 1973: Flora. Entire floral listing of Appendix I and Appendix II, Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Mr. BREAU. Any questions from Counsel?

Mr. MANNINA. Yes; thank you, Mr. Chairman.

John, you indicated earlier in response to Mr. Forsythe's questions that Interior gathers every shred of evidence before moving forward. Mr. Schreiner indicated earlier that critical habitats had not been designated because only one critical habitat was known.

In your view, is that another example of where Interior is waiting until the last piece of evidence is gathered?

Mr. GRANDY. Absolutely. And, in fact, Mr. Schreiner knows as I do that the habitat of the grizzly bear, well, we all know the grizzly bear is wilderness animal that shuns contact with people. And as a practical matter, it probably is going to be necessary to designate the remaining, what remnant there is of it, habitat of the grizzly bear as being critical. I think that is called for under the act; and under section 7 of the Act there is no relation to the "best scientific data available." That test does not even apply.

Again, if we are wrong, or if someone does want to modify or alter habitat, then the burden should be on those people who want to modify and alter to show that that habitat is not critical to the survival and restoration of the species.

Mr. MANNINA. One last question. This morning we heard Interior Department indicate they have substantially improved their petition procedures, so they are responding to petition in about 2 weeks. Have you had any recent experience that would enable you to comment on that?

Mr. GRANDY. Not recently. The only experience I have had at this point would be hearsay and would relate to the publication that was just made in the Federal Register in response to the petition by The Fund For Animals. I assume Mr. Regenstein is going to testify later on that.

Mr. BREAU. Thank you, Mr. Grandy, for your testimony.

The Chair will note during this afternoon's session we will try in order to receive all of our witnesses, we will ask them to please try to prepare a summary of their testimony and also notify members that we will operate our questioning under the 5-minute rule. In order to hear all the witnesses, I think we are going to have to adopt that policy.

The subcommittee now stands in recess until 2 p.m. this afternoon. [Whereupon, at 12:51 p.m., the subcommittee was recessed to reconvene at 2 p.m.]

## AFTERNOON SESSION

Mr. BREAUX. The subcommittee will come to order.

Our first witness this afternoon is Dr. Lee Talbot, Council on Environmental Quality.

Dr. Talbot, I want to remind the witnesses and also the committee members that we are going to try and operate under the 5-minute rule for questioning, and if you could summarize, we will try to make every effort to hear everybody.

**STATEMENT OF LEE M. TALBOT, ASSISTANT TO THE CHAIRMAN FOR INTERNATIONAL AND SCIENTIFIC AFFAIRS, COUNCIL ON ENVIRONMENTAL QUALITY, ACCOMPANIED BY GARY WIDMAN, GENERAL COUNSEL**

Mr. TALBOT. Thank you, sir. I will be very pleased, in view of the time restraints, to highlight the key points of my testimony.

The first point I wish to emphasize is that the Council on Environmental Quality has been closely involved with the development of both the Endangered Species Act of 1973 and with the international convention. The Act and the convention were included in the President's 1972 and 1973 environmental programs, which this Council had the responsibility to develop and compile.

Representatives of the Council have testified in support of the endangered species legislation.

Mr. Russell Train, while Chairman of the Council on Environmental Quality, headed the U.S. Delegation to the Plenipotentiary Conference which negotiated the International Convention.

In addition, the Council's responsibilities under the National Environmental Policy Act, and particularly section 102(c)(C) have direct relevance to both the Act and the Convention.

My personal involvement with the Endangered Species Convention dates back to 1961 when I convened a meeting of the International Union for Conservation of Nature and Natural Resources in Arusha, Tanganyika, which recommended that such a convention be developed, since it provided the only means to control the trade which even then threatened many species.

Spearheaded by congressional interest from this subcommittee, the United States prepared a draft convention and convened the Plenipotentiary Conference for its consideration in 1973. We were the first nation to ratify the convention. We provided the leadership in the development and conclusion of the convention, and much of the world looks to us now for leadership in its implementation.

The International Union for Conservation of Nature and Natural Resources, IUCN, serves as the Secretariat for implementation of the convention.

At the Triennial General Assembly of the IUCN, held in Zaire in September, I was asked by representatives of both developed and developing countries about our progress in the convention's implementation. The convention came into focus on July 8, of this year. We have only just begun to take steps toward its implementation which are visible to those from other countries.

This is important in view of our past leadership role since inactivity on our part could seriously weaken or delay the international implementation of the Convention.

A second point, the scientific authority which, under the convention, advises and recommends actions in regard to the convention, and the management authority, which has charge of the operational and enforcement aspects of the convention, have not been appointed. It is, therefore, impossible at the present time for scientists, zoo directors, and others to be in compliance with the convention, since there is no mechanism in existence that allows compliance.

A second aspect of the convention to which I would like to direct the attention of this subcommittee is the potential problem posed by endangered species of plants and plant materials. The convention makes it imperative that adequate expertise in the identification and protection of endangered plants be applied.

Five months have already passed since the time that we should have been regulating the flow of endangered plants and plant materials identified in the convention across our international boundaries.

We have not yet listed any domestic species of plants as endangered under the act. Given this circumstance, the rapid listings of those species covered by the convention cannot be expected.

Another topic of concern to the Council regarding the implementation of the convention is the permit and licensing procedure to be adopted and enforced by the management authority. It is important that if the convention is to truly protect wildlife, the permitting procedure and its enforcement must be effective.

During negotiation of the convention, a primary fear expressed by representatives of both the developed and developing nations alike was that the permit procedures we had proposed might not prove practical and workable. It was the position of the U.S. Government at that time that these procedures were workable, and that we had in existence adequate mechanisms to implement them under the convention. In fact, we even offered to share this management ability with other nations seeking to develop their own.

Much concern from the conservation community has been voiced to the Council that the present procedures under the Endangered Species Act, without the burden of the convention, are in themselves too slow to be effective.

With the needs of the convention, as well as the obvious need for control of live animal imports under the Lacey Act, the licensing and permitting procedures must be made effective and efficient. This must be done if the Government is to live up to its national and international responsibilities under the act and the convention.

A further international responsibility under the Endangered Species Act involves the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. This convention, ratified by the United States in 1941, has potentially broad environmental significance.

Implementation of this convention, along with the Endangered Species Convention, is covered by section 8(e) of the Endangered Species Act of 1973. I know of no action yet undertaken pursuant to this authority.

The last topic that I wish to address today concerns the application of NEPA to the Endangered Species Act and the convention. Those species of animals and plants listed in the Endangered Species Convention in the endangered and threatened categories, appendices 1 and 2, have only been partially listed on the current U.S. list of endangered and threatened species. Only a portion of the animals are listed, and there are no plants listed at all.

I understand that one of the impediments to listing these plants and animals is the possible requirement to prepare an environmental impact statement for each listing of a plant or animal on the U.S. list that appears on the convention list.

The Council on Environmental Quality has taken an essentially conservative view on exceptions to NEPA. If the issue is whether or not the action is "significant"—under NEPA—the Council has usually found it to be in the public's interest to have such an impact statement prepared.

In regard to those species listed as endangered on appendices 1 and 2 of the convention, individual impact statements may not be necessary. When asked this question several months ago, it was the position of the Council at that time that program statements may better serve to satisfy the requirements of NEPA and the needs of our endangered species program.

An environmental impact statement on the convention, coupled with the ratification of the convention by Senate would have appeared sufficient to meet these needs.

Appendixes 1 and 2, integral parts of the convention, could then be incorporated into the U.S. endangered and threatened species lists without additional individual impact statements.

This would not be the case, however, for new species accepted by the convention signatories of those species listed under the third appendix of the convention. These would represent actions on which Congress had not passed and would need an examination to determine whether or not the addition on the U.S. list would constitute significant Federal action.

In addition the council would probably consider program rather than individual statements to be sufficient when listing groups of domestic species, for example, such as the list of endangered plants prepared by the Smithsonian Institution at the direction of Congress.

The initial meetings with Interior only tentatively explored possible requirements in regard to the act and convention. The Council will continue to work with Interior to reach a mutually acceptable solution on this matter.

It was the position of the U.S. Government in negotiating the 1973 convention that the need to protect wildlife through this convention was imperative. The species listed in the appendixes constituted a "shopping list" for those unscrupulous persons who wished to take advantage of the lag in time before the convention was fully implemented on a worldwide scale. This problem is more pressing now, and we believe that swift action is essential.

I appreciate this opportunity to appear before you.

I have been appearing before this Subcommittee in connection with the endangered species since the early 1960s, and I would be very pleased, indeed, to try to answer any questions.

I would also point out that with me today is our General Counsel, Mr. Gary Widman, who would be prepared to provide more in-depth information should there be legal questions, particularly with regard to NEPA.

Mr. BREAUX. Thank you very much, Dr. Talbot.

I, too, remember your contributions when the act was being considered by the subcommittee, the preparation of your contribution. We thank you for that as your appearance this morning.

Regarding some of the problem areas which you have addressed yourself to this afternoon, is it your opinion that these are problem areas that results as a lack of being covered by the statute or are they more internal problems, can be corrected by additional legislation, or what is the answer to some of the problem areas?

Mr. TALBOT. My personal belief, and I believe that is shared by the Council, is that the areas which I have referred to need not require any changes in the legislation to cure. And, further, it is always better to determine whether the problems are created by implementation or by the legislation being implemented. Where it is the former, we should not yet open the legislation.

Mr. BREAUX. As regards your points made regarding NEPA, I think I got the impression, perhaps I am wrong—we will get into it later this afternoon with some of the other groups—there was the expression that perhaps an EIS should be required on any listing of any particular animal on endangered or threatened lists.

You were saying, in your opinion, it is not necessary?

Mr. TALBOT. That is the case, sir.

Might I refer this question, however, to our General Counsel, Mr. Widman, who could express what our position on this specific point is.

Mr. BREAUX. Sir, if you would join him, perhaps you might respond to the question which I really have, it will seem to me requiring an EIS be done on listing and delisting, well, you are greatly increasing the time element, and it would seem that some of the concerns this morning were that the time problem was an impediment to an effective act already.

I believe you would be increasing it.

Mr. WIDMAN. I think that is a serious concern. The activity of the Interior Department under this statute is, of course, subject to NEPA as are all other activities of the Federal Government. But that does not necessarily mean that an impact statement is required in every case of listing or delisting.

The usual procedure is to prepare an assessment to determine if a full statement is needed. But, there are two points to keep in mind.

First, it is up to the agency to determine the proper scope of the statement. Our tentative advice, when this subject was raised in the past, was that a number of species could be grouped together. A great many species, particularly foreign species, might be handled by one or two impact statements that could deal with effects in commerce in the United States.

Beyond that, it would be helpful to keep in mind the principal rule of NEPA interpretation, that is the courts will be guided by a rule of reason. The length of the statement is to be determined by the complexity of the problem, and I know of no case where anyone

has suggested that the listing of a species on the endangered species list would have an adverse environmental effect.

So it seems to be a rather straightforward issue as far as environmental impact statements are concerned.

Mr. BREAUX. Of course, is not the question not whether it would have an adverse impact but just a significant impact?

Mr. WIDMAN. That is right.

The act indicates that the test is one of significance. In determining the scope of your statement is, your investment in studies, those points are controlled by the rule of reason. But if there are no adverse impacts, obviously a much simpler job is required, than if there were adverse impacts.

Mr. BREAUX. Thank you.

Mr. Emery.

Mr. EMERY. Thank you very much, Mr. Chairman.

We have had varying degrees of comments expressed this morning.

In your judgment, do you feel that the Smithsonian has done a pretty reasonable job in studying the various species?

What is your opinion?

Mr. TALBOT. My opinion on that, sir, as a biologist and one who was involved in watching the way that this effort that the Smithsonian conducted was carried out is that they did an extraordinarily good job in the time they had, given the state of knowledge about the plant world.

I know of no serious scientific question of the validity of the job that they have done. A question or two has been raised, one I believe by the New York Botanical Society, and several others from other sources, which indicated that there were other species which should be covered on the list.

But I know of no question of any of the species on the list.

Further, in the preparation of this, the Smithsonian obtained not only the best scientific expertise available to them from within and without the Government, and from State governments, as well as private institutions and so forth, but they also had available commercial information, indeed some of the data came from—much of the data was supplied from various sources linked with commerce where this was a factor involved.

As a result, it is my belief as a scientist that the job which the Smithsonian did provides an excellent base for the action of the Secretary of the Interior under the act, that is that this does provide the information required by the section of the act which deals with listing of the species in endangered or threatened categories.

Mr. EMERY. You have absolutely no hesitation to rely on the Smithsonian for research, cataloging, and making judgments on the various species.

Mr. TALBOT. Absolutely not, sir.

Mr. EMERY. I think that is an important point. Because it was questioned this morning, and it did seem that to some of us on the committee that the Smithsonian has existed for quite a while as essentially a research arm of the U.S. Government in these areas and probably it could be relied on.

Do you find there is general agreement in the scientific community that the Smithsonian can be relied on?

Mr. TALBOT. Absolutely, sir. In this case as in many others, the Smithsonian because of its unique relationship with Government and the scientific community was able to call on the best identifiable sources of information.

Mr. EMERY. In your judgment, is the Smithsonian adequately funded to have adequate tools to do the job required, or are they working under extreme handicap?

Maybe you are not quite able to answer that. Certainly it must be reflected in the work they do relative to the work they are asked to do or could do.

Mr. TALBOT. I was not involved in the funding side or administrative side of what they did. They have a relatively limited period in which to do this, and it was really a pioneering job.

I think it is almost an axiom that the more resources one can put into such an endeavor the more complete will be the result to appear. I know that the Smithsonian itself does not regard what it did as the last word and they would like to be able to provide a much more complete set of data for all of these things, much of which exists, but was not able to be put into this given time constraints and all the rest of it.

However, as a base and as a basis for action under the act, it is my belief, and I have heard that no serious scientific question about it, that this is more than adequate.

Mr. EMERY. On another topic, there was some discussion this morning about determination of critical habitats. The Interior claims it is very difficult to determine taking a lot of time, a great deal of dispute, but how serious a problem is it to determine critical habitat?

What recommendations do you have?

Mr. TALBOT. I would approach this in terms of a scientist concerned with the endangered species most of my career and also as a Government employee at this point. A scientist would also say we need more information if we can get it. But, I would have no problem in delineating the critical habitat for a very large number of American endangered species. From what I know of a number of other biologists, some of whom are in this room, they would have no similar problem. I think it may be a question of how one defines critical habitat, but having been involved in the development of this act my belief is that the critical habitat that is being discussed is not all that difficult or all that terribly complex scientifically.

If you know there are only a number of a certain species of birds, and they are all found in a particular area, there is very little question from the intent of the act. Consequently, I do not either from a scientific point of view nor an operational point of view regard this as a particularly difficult operation for many species.

There are always species about which we need to know more, but we know a great deal about a very large number of our domestic species at this point, sir.

Mr. EMERY. Why does Interior have such a difficult time with the determination of critical habitat?

Why did they seem to be very unsure that it is possible to determine?

Mr. TALBOT. I'm afraid, sir, I am really not in a position to answer that. I do not know.



Mr. EMERY. I do not intend to get you in any trouble in that respect with something you do not have information on. But, obviously, if one group of scientists says it can be determined reasonably well enough to accomplish our goal and the Interior Department says no, I cannot understand. I am assuming both are working from good faith intentions and obviously they must be talking about different conclusions or different standards.

Now, what is there in the Interior Department's understanding of critical habitat that renders it more difficult to determine than what independent biologists have arrived at? They must be working from different standards.

Mr. TALBOT. Well, I think, sir, one of the factors that enters into it, which becomes standard, is one of bureaucratic caution.

Mr. EMERY. That is what I wanted to hear.

Mr. TALBOT. And if one is responsible for such a program, he may be concerned at possible legal action, and he may wish to be sure that he has every possible bit of information absolutely solidly so that there can be no legal challenge to what he has done. But viewed realistically, sir, there ain't no such animal scientifically and consequently in my view, one does as well as one can, and there is, as Mr. Widman indicated earlier in terms of NEPA, a rule of reason here. This clearly is what was in the minds of the framers of the Endangered Species Act.

Mr. EMERY. We develop this concept as a basis to work from, the concept of critical habitat is only used to define an area in which it is reasonably determined that a given species may thrive or at least exist, and it is open to debate what one's intention is, I suppose.

Mr. TALBOT. That is the case as I understand it. The critical habitat is that portion of the habitat which is necessary to assure survival, continued viability of the species involved. That is not all that difficult to define for these purposes in my view.

Mr. EMERY. I have a couple more questions, and I will try to speed it up.

Mr. BREAUX. All right.

Mr. EMERY. How comprehensive must the environmental impact statement be relative to declaring certain species to be endangered or threatened?

Mr. TALBOT. Well, this was the point made by Mr. Widman. If I may paraphrase it from a biological point of view, in the first place, the objective of NIEPA is to insure that environmental factors are given adequate attention. It is not to provide impediments in the path of accomplishing environmentally sound or indeed any sound action. The listing or delisting, and particularly the listing of species in many cases, would appear to be treatable through what amounts to a program statement which might cover a large number of species.

We have suggested, for example, that the whole Smithsonian list could be covered in principle by one program statement. But the considerations involved, the parameters with which you are dealing and so forth, are sufficiently common to all of them that it simply would be redundant and ridiculous to reinvent the wheel 3,000 times.

There may be some individual species where there are sufficiently complex factors, for example, the grizzly is such a possibility, where because of a series of factors the species cannot be lumped with a

series of other ones. There may be such cases where an individual statement might be required.

But we would certainly not hold that they were required for every individual one.

Would you care to add anything to that?

Mr. WIDMAN. No, I think that summarizes it pretty well. The controversies involving these species sometimes get into the economic area, but Interior, of all the agencies, has been the strongest in suggesting that an environmental impact statement is to be limited to environmental, not economic, facts. And under that view, and there is some support for it, the controversial economic issues should be resolved through some other mechanism. The environmental impact statement is not the problem.

Mr. EMERY. Two questions, just to conclude. The statement was made this morning that the sea turtle was required to have an impact statement. Can you confirm this?

Mr. SPENSLEY. Excuse me. I think this morning we asked whether they had consulted with CEQ with regard to preparing an impact statement on sea turtles and they indicated they had.

Mr. EMERY. No consultation to the best of your knowledge?

Mr. WIDMAN. I do not recall any consultation on that issue. There may have been some telephone calls, raising hypothetical questions, which would have elicited the same answer I gave to Mr. Breaux earlier. That is, in general every agency is covered by NEPA, but it is up to the agency to determine whether its actions have significant environmental effects. I would not want to say there have been no telephone calls of this sort. But there were, I do not recall them. I would be happy to see if there is anything in our files on consultation on sea turtles. [The committee staff was later advised by Mr. Widman, that there were no CEQ files indicating consultation on sea turtle EIS issues.]

Mr. EMERY. If you would.

Mr. Chairman, in the interest of time, I will relinquish questioning.

Mr. BREAUX. Thank you. Thank you, gentlemen, for your appearance and testimony. We have one more question from counsel.

Mr. SPENSLEY. I would like for you to submit one thing for me if you would, please. We heard testimony this morning that it is highly unlikely that the Department of Interior, Fish and Wildlife Service, will get to listing many plants because they are giving priority to animals.

I would like for you to consider what the Council on Environmental Quality might do as a Federal body that is interested in policymaking environmental area to perhaps influence that decision.

And second of all, if you could respond in 30 seconds to keep within our time limits, NEPA, as you are well aware, requires balancing of social, economic and environmental factors in decision-making. It appears from some of the criticism of the Species Act, particularly with respect to section 7, that there is no balancing required in section 7.

Would you want to comment on this? I believe it is a difficult area. You might want to comment on it for the record at a later time.

Mr. WIDMAN. The requirement of an impact statement would apply if the action were significant—

Mr. SPENSLEY. Excuse me. I am not referring to an impact statement preparation at all. I am referring strictly to the philosophy of the act. I am referring to the fact section 7 says you shall not destroy, modify, et cetera, a critical habitat. It does not say you will balance the potential harm against any of the benefits from imposition on that critical habitat.

Mr. WIDMAN. I think that you are facing two laws which conflict. One, NEPA, is the more general. Section 7 of the Endangered Species Act is the more specific. Of course, as a general rule of legal construction, whenever you have that situation, you respond to the more specific legislative direction.

Mr. SPENSLEY. I have no problem with the conflict. I am asking a philosophical question, I guess.

Mr. WIDMAN. I see.

Mr. SPENSLEY. In NEPA we balance environmental considerations with economic and social factors, presumably to come up with a decision that considers and weighs all factors. In section 7 of the Endangered Species Act, agencies are required to make a decision solely on the basis of avoiding imposition on any critical habitat.

My questions to you is do you find it to be inconsistent perhaps with the philosophy of NEPA?

Mr. WIDMAN. Not necessarily. In the case of endangered species, it seems to me there has been a congressional balancing of the worth of endangered species, and it was determined that threats to such species outweigh a great many other factors, maybe all other factors. I think you really have a congressional reading on that balancing. The balancing has really already taken place, and it was done by the Congress. It was not left up to individual agency heads to balance the values, in this specific case.

Mr. TALBOT. It would seem to me that that is entirely consistent with the findings and purposes of the act, and the fact that we are dealing here with a go—no go situation. That is to say, destruction of critical habitat defactor creates the destruction of a species in most situations. And consistent with the findings and objectives of the act, we do not let that happen.

Mr. BREAU. Thank you.

Mr. MANNINA. May I ask a brief question?

Mr. BREAU. Yes.

Mr. MANNINA. It has been suggested to me that substantial scientific evidence exists to justify the listing of brydes whale as an endangered or threatened species. Yet, the Commerce Department has made no effort in this direction.

Can you comment on whether that particular species should be listed?

Mr. TALBOT. May I submit that for the record? I would prefer to submit it for the record, if I may, because I would like to check up on the data for that.

Mr. MANNINA. Yes.

[The information referred to follows:]

#### ANNEX A—TO TESTIMONY OF DR. LEE M. TALBOT COUNCIL ON ENVIRONMENTAL QUALITY

In response to your question as to the status of the Bryde's whale, and as to whether it should be listed as an endangered or threatened species:

Bryde's whale (*Balaenoptera edeni*) is found in tropical and temperate coastal waters in the Atlantic, Indian, and Pacific Oceans. The biology of this species is poorly known. In appearance it is somewhat like the sei whale and is seldom over 40-feet in length. The general similarity to the more abundant sei whale makes field identification difficult and, therefore, population estimates suspect. Population estimates made by the Japanese for the western north Pacific Ocean indicate that the abundance is somewhere between 5,000 and 18,000 individuals. This population is the only population that has been significantly exploited. There is only one current Bryde's whale fishery in Japan with an annual sustained catch of about 40 whales. The range of the population size represents the uncertainty of the methods used for censusing this species. There is little data in existence on the present total or initial world population of this species. Studies on feeding habits indicate that the Bryde's whale feeds on small schools of fishes and crustaceans that are members of the surface water community.

To my knowledge, sufficient scientific data do not exist to allow a valid decision at this time on whether or not this species is threatened or endangered. The Marine Mammal Protection Act currently furnishes this species complete protection from exploitation by the United States. No Bryde's whale products are allowed to be imported into the United States, and it seems unlikely that listing this species at this time will furnish any additional protection.

Mr. BREAUx. Thank you very much.

I would like to welcome once again the testimony of Christine Stevens, secretary, Society for Animal Protective Legislation.

#### STATEMENT OF CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

Mrs. STEVENS. I am grateful to the members of this committee for having produced this wonderful piece of legislation. I am here primarily to testify against any possible weakening of this law, which is a landmark, not only in our country but worldwide.

I will submit my testimony, if I may, Mr. Chairman, for the record, and make a few points based on this morning's testimony, and also highlight a little bit.

Mr. BREAUx. Your testimony will appear in the record in its entirety.

[Statement referred to follows:]

#### STATEMENT OF CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

The Endangered Species Act of 1973 was a major legislative triumph, putting the United States in a position of undisputed world leadership in the protection of threatened and endangered creatures. Conservationists and humanitarians are profoundly grateful to the members of this distinguished subcommittee for the hard work it did and the sound judgment is displayed in bringing about enactment of this landmark legislation.

Whenever such a law is passed, efforts are bound to spring up to undermine and weaken its provisions. The Society for Animal Protective Legislation strongly opposes such attacks and recommends that the Endangered Species Act remain intact. We believe that improved administration is the answer to such criticisms as have been levelled at the law. In some cases, needed administrative action has already been taken to smooth out difficulties which were initially encountered. Similar action can be taken in other areas when sufficient funds are appropriated to bring about full enforcement of the law and to enable the Departments of Interior and Commerce to be more adequately staffed to carry out their important responsibilities.

It is discouraging that the House Subcommittee on Interior Appropriations failed to recommend essential funding. We hope the Fisheries and Wildlife Conservation and the Environment Subcommittee will exert its influence to obtain increased appropriations to carry out the intent of Congress when it accepted the Subcommittee's recommendations and passed this third and most effective of the federal endangered species laws so far enacted.

A proposal was made earlier this year to allow interstate commercial transactions in the sperm whale oil which has been released by the Department of Defense. The Society for Animal Protective Legislation opposes this proposed weakening of the Endangered Species Act and proposes that if any sale of the oil is permitted it be on a one-time one-sale basis for the specific purpose of saving living sperm whales. We propose that if the U.S. government does not wish to maintain the oil in storage, it be offered to the two major whale killing nations with the stipulation that the number of whales which the oil represents (some 2,000 animals) be spared in the annual antarctic voyage and that the oil be used towards a phase-out of whaling. Such a one-time disposition of the oil would help rather than harm the future of the great whales. But if the sperm oil is put into commercial channels in the United States, it will be impossible to ensure that other sperm oil, from sperm whales still living and swimming in the seas, will not also enter the market. When that happens, the United States will be contributing to the decline of the creature with the largest brain in the world. We will have lost our preeminence as protector of endangered species, and for an insignificant amount of money, we would have sold our moral leadership.

We must not chip away at the Endangered Species Act for the convenience of moneyed interests. It is these interests that have brought many of the animals of the Endangered Species List to this sorry pass.

Animals dealers may seek to make their profits easier by modifying the law. Such efforts should be firmly resisted. To keep a perspective on the meaning of the Act and the ways in which attempts have been made to evade it, I would submit for the record a news release from the Justice Department on the case of one of the world's biggest wild animal dealers, Fred J. Zeelandelaar. The release states in full: "Paul J. Curran, United States Attorney for the Southern District of New York, announced today that Fred J. Zeelandelaar was sentenced today by United States District Judge Robert J. Ward after having been convicted of perjury on November 22, 1974, after a five-day trial. He was placed upon one year's unsupervised probation, upon the condition that he pay \$5,000 to the Department of the Interior, the money to be used for the protection of endangered species of wildlife.

"John N. Bush and William R. Bronner, the Assistant United States Attorneys who prosecuted the case, stated that the perjury for which the defendant was convicted had taken place during a previous criminal trial in which Zeelandelaar was the defendant. The charge in that case was the submission of false documents to the Department of the Interior in an effort to obtain a permit to import cheetahs, which are considered an endangered species. "Zeelandelaar, who resides in New Rochelle, N.Y., is the President of F.J. Zeelandelaar, Inc., which deals in wild animals."

The Department of the Interior has been even-handed in its prosecutions under the Act. Furriers suffered a major blow when an alert Pan American employee observed spotted cat skins dangling out of a damaged crate marked "Leather." The action took place during the deliberations of a 91-nation Convention on International Trade in Endangered Species of Wild Fauna and Flora. As reported in *The Christian Science Monitor*, "Special Agent Jim Beers received a telephone tip-off at John F. Kennedy International Airport. An alert Pan American Airways employee had noticed a shipping crate from Brazil marked leather; instead, sticking out of a hole was something that looked like the pelt from a spotted cat.

"That began a year-long international search, a grand jury seizure of more than 60,000 documents, and breaking up a \$5 million ring of illegal fur traffickers, operating in 30 countries.

"Veseley-Forte, a Manhattan fur merchant, was found guilty on 50 counts of purchasing and receiving illegal skins under the Lacey Act, which forbids trafficking of wildlife in violation of a U.S. law or any foreign laws. The firm was fined \$500,000, all but \$10,000 of which was suspended for as long as the offense was not repeated. Thirty-two other furriers signed consent decrees enjoining them as well from any further illegal trafficking in skins.

"But the real losers were the 30,068 ocelots, 46,818 margay, 13,470 otters, 5,644 leopards, 1,939 jaguars, 1,867 cheetahs, 469 pumas, and 217 ariranhas (giant otters) killed for their pelts and shipped by this ring to various European markets to fill the insatiable, and growing, world appetite for rare furs."

As for smuggled whale products, the Department submitted the following list under the 1969 statute:

"1. March 11, 1971—Japan Food Corporation. Three cartons dried whale meat \$100 penalty and forfeiture of merchandise

"2. June 23, 1971—Holly World Food 200 bundles, 4,000 pounds sperm whale meat \$350 penalty and forfeiture of merchandise

"3. January 17, 1972—Pier I Imports 189 cartons and 5 tins and 62 bundles and 49 tins of smoked and barbecued whale meat. Merchandise forfeited

"4. April 14, 1973—Guormet Food, Inc. 152 cases broiled whale meat. Forfeited by HEW because of mislabeling."

Most recently, as reported in *Audubon Leader*, September 26, 1975, "Jailed for Wildlife Offense. An Indiana man found guilty of attempting to sell a leopard to an undercover agent of the U.S. Fish and Wildlife Service has been sentenced to three years in a federal prison; the leopard is an endangered species protected under federal law."

These examples demonstrate the value of Endangered Species legislation. They demonstrate that needed action can be taken. However, the numbers of such actions would certainly be increased and the deterrent value tripled or quadrupled if the Department of Interior and Commerce were given better funding and were able to engage an ideally qualified and motivated staff to carry out the provisions of the Endangered Species Act.

Conservationists have sometimes criticized the Interior Department for failing to list species that are plainly in trouble. We have been told, in response, that shortage of staff has forced the small scientific corps to do its own secretarial work. Or we have been told that the check-off system is unduly complicated, requiring such a long series of initials that needed proposals are bogged down in transit from one office to another for unconscionable periods of time. We are told that enemies of a functioning Endangered Species Act use the bureaucratic snarl for their own purposes hoping to destroy the law.

Through these oversight hearings, the Congress can direct the Department of the Interior to put a higher priority on the Endangered Species Act and to develop greater efficiency in the listing process. We hope, Mr. Chairman, that you will do so.

At the same time, we hope you will resist any erosion of the Act's firm stance against profiteering in endangered species. The Act is one of our country's proudest achievements. It must not be lessened through ill-advised retreat from the principles established through a long, thoughtful legislative process from 1966 when the first federal Endangered Species Act was passed, through the second Act passed in 1969 and culminating in the 1973 Act, which incorporates provisions required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, a great achievement of our country of which we can all be profoundly proud.

Mrs. STEVENS. Thank you. The first point I would like to make is that the appropriations are insufficient. I think it is very important that this committee should appeal to the Appropriations Committee to take that into account. Because there are some legitimate criticisms about the way the act has been administered that are not directly related to the money, but even with the best administration in the world it is too big a piece of work to do without further funding.

I would like to emphasize the importance we attach to enforcement activities.

You may have noted in Mr. Bavin's testimony on page 14, it says: "During fiscal year 1975, we handled 1,343 investigative matters under the endangered species classification. Of that, we closed 776 and 567 were still pending on July 1, 1975. During this period, criminal prosecutions resulted in convictions of 63 individuals with the courts imposing total fines of \$18,585 and 20 months of jail sentences, with 19 months suspended."

I wish we might have information like that from National Marine Fisheries Service. I have the general impression that there has been more activity in this area in the Department of Interior, and I feel it is very important as a deterrent.

I will quickly mention some of these which are in my testimony.

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the law. Such efforts should be firmly resisted. To keep a perspective on the meaning of the act and the ways in which attempts have been made to evade it, I would submit for the record a news release from the Justice Department on the case of one of the world's biggest wild animal dealers, Fred J. Zeehandelaar. The release states in full:

Paul J. Curran, United States Attorney for the Southern District of New York, announced today that Fred J. Zeehandelaar was sentenced today by United States District Judge Robert J. Ward after having been convicted of perjury on November 22, 1974, after a five-day trial. He was placed upon one year's unsupervised probation, upon the condition that he pay \$5,000 to the Department of the Interior, the money to be used for the protection of endangered species of wildlife.

John N. Bush and William R. Bronner, the Assistant United States Attorneys who prosecuted the case, stated that the perjury for which the defendant was convicted had taken place during a previous criminal trial in which Zeehandelaar was the defendant. The charge in that case was the submission of false documents to the Department of the Interior in an effort to obtain a permit to import cheetahs, which are considered an endangered species.

Zeehandelaar, who resides in New Rochelle, New York, is the President of of F. J. Zeehandelaar, Inc., which deals in wild animals.

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"That began a year-long international search, a grand jury seizure of more than 60,000 documents, and breaking up a \$5 million ring of illegal fur traffickers, operating in 30 countries."

I think enforcement is the key in these commercial types of violations. If we do not get people actually up before a judge and paying big fines or even going to jail as the last case where a man was sentenced to 3 years in Federal prison, the law will be ignored. I think this is of very great importance, and it has not been mentioned earlier.

I would like to comment on what has had a lot of attention, and that is extremely long delays.

I certainly agree that it is not necessary to have detailed scrutiny by the Department after such scrutiny has already been given by the Smithsonian or other very reliable scientific sources. It is essential to get species listed that are in trouble. Otherwise, we may very well find that some of the species that are sitting there in the pending list will become extinct before the Department can ever get around to doing the work to list them.

Although amendments are proposed by the Department, and apparently agreed to by both Departments, it seems clear from the testimony of government witnesses that they are not really necessary.

I would cite pages 7 and 8 of Mr. Bavin's testimony which show how problems initially regarded as requiring legislative change have

been solved administratively, and pages 12 and 14 of Mr. Greenwalt's testimony pointing in the same direction.

Again, I do not think it is necessary for me to read those. The committee has all of this material.

But it is our belief that the difficulties that were initially encountered can be dealt with administratively and do not require new action by the Congress. We think the Congress did an excellent job. There may have been some minor matters that were not looked into down to the very last detail. But we believe that can be solved administratively, and in particular we would very much oppose the idea of allowing sperm whale oil to get back on the market. If the major amendment proposed by Interior were accepted, it would of course be back in, and the Government, if it really was serious in trying to prevent violations, would have to spend an absolutely fantastic amount of money with a sort of sperm whale oil FBI running around trying to keep any smuggled oil from coming in.

We do not suggest that if the committee does not feel that that oil should remain in storage, that it should be offered on a one-time one-sale basis to the two major whaling nations, that is, Japan and the Soviet Union, with the proviso that it be used as a phaseout toward the end of commercial whaling.

Mr. Chairman, in the interest of time, I will not say anymore unless you have questions.

Mr. BREAUX. Thank you very much, Mrs. Stevens.

I take it that you are clearly saying that you do not feel, and your association does not feel, that environmental impact statements should be required before an animal or species is listed on either endangered or threatened?

Mrs. STEVENS. I would have said absolutely yes if I had testified before I heard the people from the Council on Environmental Quality. If it was a very simple matter, we certainly do not object, so long as it does not cause delay. That is our concern. I think there are many ways in which delay can be cut down on. I think the chart you received this morning is too complicated. There is no reason for that many different Federal employees to sign off.

I think the very movement of it from office to office, from what I can gather, allows certain individuals who may not be very eager to have the law work very well to have an opportunity to slow it up. That would happen also with an environmental impact statement, but if there were guidelines put out which would mean very minimal amount of work on it, we have no objection per se.

Mr. BREAUX. Do you feel that the same amount of information and data should be required to delist an animal as required to put it on the list originally?

Mrs. STEVENS. Certainly, I would think that should be balanced, in other words, I think you are probably referring to alligators and of course their populations can grow rapidly because they are reptiles—

Mr. BREAUX. Very rapidly is the same amount of time that it takes to put animals on the list.

Mrs. STEVENS. Yes, I think it is very difficult with all these different species that have such different characteristics. And once we get into insects, they reproduce even more rapidly. On the other hand,



when they are going out, they may be going out at a tremendous pace. I think there has to be more judgment exercised within the Department. That is really the major answer I can give you on a matter of this kind. In other words, there would be times when you would need to solicit a wide variety of scientific opinion because it appears to be very diverse.

On the other hand, when all visible scientific opinion tends in one direction, then it seems to me a terrible waste of time to keep writing letters all over the world, as I understand they did in connection with those sea turtles, they wrote to practically every nation in the world—in fact, all of them that had any sea coasts—and some of them were awfully slow to reply.

This is why sea turtles are still in a lot of trouble, and since the cannery now want to make more delay happen, obviously that is not what we are looking for.

Mr. BREAUX. One of my concerns is that we do not set a double standard, if a double standard is not indeed required that getting the information as quickly as possible to list the animal but when some group says this animal should be delisted in this particular portion of its range, then we are going to go out and write all around the world and get every available bit of information. That, too, presents a problem that I am concerned about. I think the information should be the best available information and should not be delayed on either side, looking at information you have and based on that information.

Mrs. STEVENS. Yes. Best available. There is no other way to write the law that I can think of.

Mr. BREAUX. Thank you, Mrs. Stevens.

Mr. Emery?

Mr. EMERY. No questions.

Mr. BREAUX. Any other questions?

Well, Mrs. Stevens, we would like to thank you very much again.

Mrs. STEVENS. Thank you.

Mr. BREAUX. Our next witness will be Lewis Regenstein, Washington coordinator, the Fund for Animals.

The committee welcomes you. Your testimony will be published in the record, if you can help us by summarizing it.

#### **STATEMENT OF LEWIS REGENSTEIN, EXECUTIVE VICE PRESIDENT, THE FUND FOR ANIMALS, WASHINGTON, D.C.**

Mr. REGENSTEIN. Thank you, Mr. Chairman. Thank you, again marize.

[Prepared statement follows:]

#### **STATEMENT OF LEWIS REGENSTEIN, EXECUTIVE VICE PRESIDENT, THE FUND FOR ANIMALS**

Mr. Chairman, and members of the committee, my name is Lewis Regenstein, and I am executive vice president of The Fund for Animals. We are a conservation and animal protection group that works to preserve wildlife, save endangered species, and promote humane treatment for all animals.

I appreciate the opportunity to appear here today to testify on the government's administration of the Endangered Species Act of 1973, an excellent piece of legislation for which this Committee deserves great credit. This legislation, and the endangered species problem, has been one of our major concerns for over four years. The administration of the Act was the subject of

my Master's thesis in Political Science, and I have just had a book published on this subject, entitled *The Politics of Extinction*.

Before summarizing my statement, may I ask that it be included in the hearing record in its entirety, along with some other selected material, including letters we have sent to the Departments of Interior and Commerce on this subject, and various articles and news releases describing the government's flagrant violations of this crucial law.

During the past 150 years, the rate of extermination of mammals has increased 55 fold. If (these) exterminations continue to increase at that rate, in about 30 years all the remaining 4,062 species of mammals will be gone."

Because of a political decision made by the U.S. Departments of Interior and Commerce not to enforce laws to protect endangered wildlife, the U.S. Government is dooming to extinction hundreds of rare species.

Since 1600 A.D., over 228 species and subspecies of birds and mammals have become extinct. The vast majority of these exterminations have been the result of direct or indirect killing (e.g., destruction of habitat) by man.

Today, it is estimated that an average of one or two species is now being destroyed every year. Scientists agree that over nine hundred species of higher animal life are now seriously threatened. The decisions made by governments in the next few years will determine which of these species survive, and which will disappear forever.

In the United States, 112 species of native fish and wildlife are officially considered to be in grave danger of extinction, and are on the U.S. endangered species list, along with about 300 foreign species. But hundreds of other imperiled species are unlisted and thus unprotected. Moreover, the United States, as the world's richest nation, has for years provided the major market for live animals and luxuries made from wildlife products, thereby creating a demand that has been destroying much of the rest of the world's wildlife. In order to stem the massive killing of an international trafficking in rare wildlife, several years ago conservationists began working for legislation to protect native endangered species and close off the U.S. market to such wildlife, in the hope that this would lessen the economic incentive for much of the killing or capture abroad of some of these species.

On December 28, 1973, a landmark piece of legislation—the Endangered Species Act of 1973—was signed into law. The enactment of this remarkably strong bill followed a campaign of over seven years by conservationists to have such a law passed, which replaced the virtually toothless Endangered Species Conservation Act of 1969. The new law greatly broadened the concept of endangered, and gave the government much greater authority to protect rare species.

Under the law, the Commerce Department was given jurisdiction over most marine life (seals, whales, dolphins, porpoises, fish) and the Interior Department was given responsibility for everything else. The law generally prohibits the killing or capture in the U.S. of animals on the endangered list, nor can interstate trade in their products be allowed. By generally banning the import into the U.S. of foreign endangered species, the law helps foreign countries protect their wildlife.

But non-administration of the law has rendered it nearly useless. Since the new Endangered Species Act was signed into law almost two years ago, a mere handful of species have been added to the U.S. government's endangered list. Among the hundreds of imperiled animals that are unlisted, and therefore unprotected by U.S. law, are some 175 species on Appendix I—the most endangered category—of the Convention on International Trade in Endangered Species of Wild Flora and Fauna.

This international convention was agreed to by the U.S. and about 80 other nations in March, 1973, and was ratified by the U.S. Senate on August 2, 1973. The treaty went into effect around 1 July, 1975. Despite the fact that the U.S. is obliged by Federal law and international treaty to protect these Appendix I animals, almost half are not on the U.S. endangered list. Nor has Interior begun enforcing the Convention by banning their import, thus leaving them vulnerable to continued exploitation.

Some animals which are on Appendix I but are excluded from the U.S. list include:

The glacier bear, a small, bluish colored bear highly sought by trophy hunters. It is still legally hunted in Alaska ten months of the year, although only about 100 to 500 of these bears remain.

The clouded leopard and the marbled cat, two of the world's rarest cats.

The Caribbean monk seal, which is so rare that it has not been sighted in over ten years, and may be extinct.

The Asian elephant, which is known to be seriously endangered, but is still being imported into the U.S. This provides a drain on the remnant wild population, particularly since the normal way of capturing young elephants is to shoot the mother and any other members of the heard that are present.

Other endangered and threatened species that are unlisted and therefore unprotected (most of which are on the Convention's Appendix II, the next most endangered category) include:

The Mexican wolf, down to less than 200 individuals, which sometimes wander into the U.S. to be shot by ranchers.

The Chimpanzee, perhaps man's closest living relative, which is seriously endangered due in part to the demand for "specimens" by medical laboratories, and pet and wild animal dealers in the U.S. Baby chimps are most actively sought, which are obtained by killing the mother and seizing the terrified infant. The Interior Department's Office of Endangered Species has prepared a report showing that the chimpanzee is in serious danger, but no action has been taken to protect it.

In response to these hearings, Interior is just now placing a few species on the endangered list, the first to be added since the Act was passed almost two years ago. Included in this group are the Cedros Island mule deer, of which the Interior Department estimates "less than a dozen" are left; the peninsular pronghorn antelope, depleted to the point—in Interior's own words—that "only two or three small remnant groups survive"; and the American crocodile, whose entire population of less than 350 includes only about eleven breeding females.

For some of these animals, Interior's belated action has perhaps come too late. Once an animal is down to less than a dozen or so, it is usually too late to save the species, for it has by thistimealready passed the point of recovery.

The Commerce Department has shown even less interest in the Act than Interior, and is yet to add a single species under its jurisdiction to the lists.

In order to prevent species from reaching this point of depletion, the law also created a new list of "threatened" wildlife, animals that are "likely within the foreseeable future to become endangered throughout all or a significant portion of their range." Only about 9 species have been placed on this list, including the large species of Australian kangaroos and the grizzly bear. But Interior's regulations—while designed to limit the annual kill in Montana to 25 bears—would allow the state of Montana to continue selling about 1,000 grizzly hunting licenses each year, a figure which exceeds the total number of grizzlies remaining in the lower 48 states, and seems guaranteed to result in their annihilation. Moreover, under pressure from the kangaroo hide industry, Interior also seems to be moving towards lifting its ban on the import of kangaroo skins, which had been flowing into the U.S. by the hundreds of thousands each year. We have learned that some Australian states plan to adjust their quotas of the number of kangaroos to be killed according to whether or not Interior's import ban is lifted. If the ban is lifted, this will drastically increase the number of these threatened kangaroos that will be killed in Australia. I will submit for the record some data on this matter, including some very interesting correspondence between the Interior Department and officials of the kangaroo hide industry.

Much of the responsibility for the Interior Department's intransigence can be attributed to middle level officials in the Department's Fish and Wildlife Service, such as Associate Director Keith Schreiner, who have prevented or delayed the listing of countless species because of political pressure, economic considerations, or bureaucratic red tape. For example, big horn sheep in the western U.S. have been kept off the list because of pressure from the hunting/firearms lobby. Although hunting is a major threat to the survival of these animals, they are still eagerly sought by "sportsmen."

Schreiner was recently quoted in an Interior Department publication as saying that, at the current rate of progress, "it would take us 6,000 years to list the 200,000 full species of (plants and) animals that are thought to be threatened or endangered now." Interior is also recommending that Congress add weakening amendments to the Act, which would seriously undermine its potential effectiveness.

This general situation has been brought to the attention of Assistant Interior Secretary for Wildlife, Nathaniel P. Reed, and Lynn Greenwalt, Director of the U.S. Fish and Wildlife Service. Both officials have endorsed the

"cautious," do-nothing approach, so as not to offend vested interests, such as the gun lobby, which are exploiting rare species.

Interior's policy has already had tragic and irreversible consequences, since it appears that several species of unlisted mollusks and crustaceans have recently become extinct. These obscure life forms are important not only as an indispensable part of the food chain and in maintaining the natural ecological balance. According to an Interior Department news release, they have recently been recognized as being able to produce antibiotics, tranquilizers, antispasmodics, and antiseptic chemicals in their systems. Scientists believe that these unique attributes can be used as models for the development of synthetic drugs. Thus, with the recent extinction of some of these creatures, a potential cure for cancer may have already been lost. Moreover, hundreds of endangered mollusks and crustaceans are still being kept off Interior's list, despite efforts by conservationists to have them protected.

To make matters worse, there are indications that Interior, under pressure from the gun lobby, may be moving towards removing the African leopard and the eastern timber wolf (found in Minnesota) from the endangered list, so that large-scale hunting and the importing of trophies can be resumed. Already, Interior has taken the first step in the delisting process, and has announced a Notice of Review of the status of these species.

In addition, Interior is in the process of removing the American alligator from the endangered list throughout much of its range, in part to allow commercial alligator killing. This will result in the resurrection of the now-moribund alligator hide market, which will bring about a return to large-scale alligator poaching wherever they are found.

The Interior Department's administration of the Endangered Species Act has been so irresponsible that Russell Peterson, chairman of the Council on Environmental Quality, sent a letter on February 3, 1975 to Interior Secretary Rogers Morton (who is now Secretary of Commerce) charging that several policies being carried out by Interior are illegal CEQ pointed out that Interior's proposed or adopted regulations for conserving kangaroos and grizzly bears did not provide these threatened species with adequate protection, and were "not consistent with the letter or spirit of the Endangered Species Act of 1973."

The U.S. Department of State has also questioned Interior's violation of U.S. law and international treaty obligations. On 16 April, 1975, Acting Deputy Assistant Secretary of State Lindsey Grant wrote to Deputy Assistant Secretary of Interior E. U. Curtis Bohlen, urging Interior to comply with the Endangered Species Act and the Convention by adding Appendix I species to the U.S. list by July of this year. Otherwise, warned Grant, "these discrepancies will cause trouble for both our Departments if they are not eliminated before July."

And on 21 March, 1975, a letter organized by Senator Alan Cranston (D-Calif.) and signed by three other Senators—Warren Magnuson (D-Wash.), Philip Hart (D-Mich.), and Robert Byrd (D-W.Va.)—was sent to Fish and Wildlife Service Director Lynn Greenwalt, expressing "serious and urgent" concern that Interior was not "pursuing the legislative intent of the Act and its mandates . . ."

The U.S. Department of Commerce has adopted an even firmer policy of virtually ignoring and not enforcing the Endangered Species Act. It has refused to list some species of dolphins (or "porpoises") which are being wiped out by the hundreds of thousands each year by the U.S. Pacific tuna fleet, which intentionally nets entire schools of dolphins in the hope that yellowfin tuna will be found beneath them. Reports prepared by the Commerce Department's National Marine Fisheries Service (NMFS) show that one species of dolphin may be reduced by 30 to 80 percent, and that another may not be able to withstand further killing of this sort. Yet, NMFS Director Robert W. Schoning has refused to recommend these dolphins for the threatened or endangered list for fear that this will offend the powerful U.S. tuna industry.

NMFS has actively prevented Interior Department biologists from adding two Appendix II species—the green sea and the loggerhead turtles—to the endangered list for almost two years. In a 4 January 1974 news release, the Interior Department proposed these turtles for the endangered list and pointed out that "green sea turtle stocks in the Caribbean, once believed to have numbered at least 50 million, now are estimated at less than 10,000. Reproductive potential may be destroyed in the near future if present harvest levels are maintained." Soon afterwards, NMFS stepped in, claimed jurisdiction over

sea turtles, and, under pressure from commercial interests, prevented action from being taken. On 12 June 1974, Howard Pollock, Deputy Administrator of the Commerce Department's National Oceanic and Atmospheric Administration, stated at a symposium on endangered species, "I see no reason in the world why the green sea turtle shouldn't be placed on the (endangered) list and I am certain that it will be. I would assume some action will be taken in the next two or three weeks."

Yet, a year and nine months after the Interior Department's announcement, the turtles are still unlisted. All during this period, the U.S. has remained a major market for sea turtles products, and has continued to exert a tremendous demand for their slaughter. The Department of Interior and Commerce have now published a proposal to list the turtles as "threatened" instead of "endangered," and to largely allow commercial imports to continue for at least two more years. But it is still questionable whether the actual listing will ever take place, and whether the proposed regulations will have any real effect in providing adequate protection to these endangered turtles.

The Washington, D.C. law firm of Hogan & Hartson is representing the Fund for Animals in an attempt to force Interior and Commerce to comply with the law and protect the species covered by the Convention before it is too late. As a result, some of these species are being "proposed" for the endangered list, but final action still remains in doubt. In the meantime, these species remain unprotected.

In numerous other areas, the government has been derelict. Although the Endangered Species Act provides protection to critical habitat essential to the survival of endangered species, Interior is yet to identify any such habitat. Nor have any of the thousands of species of endangered plant life—such as certain orchids and cactus—been placed on the protected lists, even though the Smithsonian Institution has identified over 2,800 species and subspecies of endangered and threatened plants in the U.S. alone.

Nor has any real action been taken under Section 8 of the Act, which calls for Interior, through the State Department, to undertake financial and other assistance to foreign countries to help them protect endangered wildlife.

Other government agencies such as the Army Corps of Engineers, the U.S. Forest Service, and the Bureau of Reclamation, are causing more direct and rapid elimination of wildlife by destroying the habitat of endangered species, even though this is ostensibly prohibited by the Act.

The Federal Highway Administration of the Department of Transportation, in cooperation with the Mississippi State Highway Department, is helping to build a highway directly through the last remaining area containing the only known population of the endangered Mississippi sandhill crane, now down to about 40 birds. Interior is opposing the highway, but unless it is stopped by court action, the Mississippi Sandhill Crane is doomed.

Mr. Chairman, we are delighted that these hearings are being held. One Interior Department employee working on endangered species has commented that "if we get through those hearings unscathed, I fear the whole program is going to be dismantled." I therefore hope the Department's policies will be subjected to the intense scrutiny they deserve.

The new Endangered Species Act of 1973 is strong enough, if adequately enforced, to save many species of disappearing wildlife. Yet, despite the clear mandate of the law, countless species are going down the drain while indifferent government bureaucrats look the other way.

That completes my testimony, Mr. Chairman. Thank you again for the opportunity to appear here today.

Mr. REGENSTEIN. I very much appreciate the opportunity to appear here today to testify on the Government's administration of the Endangered Species Act of 1973, an excellent piece of legislation for which this committee deserves great credit. This legislation, and the endangered species problem, has been one of our major concerns for over 4 years. The administration of the act was the subject of my master's thesis in political science, and I have just had a book published on this subject, entitled the Politics of Extinction.

Mr. BREAU. I thought that book might be about congressmen.

Mr. REGENSTEIN. It is about other endangered species, Mr. Chairman. [Laughter.]

I would like to begin with a quote from Dr. Lee Talbot.

During the past 150 years, the rate of extermination of mammals has increased fifty-fivefold. If these exterminations continue to increase at that rate, in about 30 years all the remaining 4,062 species of mammals will be gone.

Because of a political decision made by the U.S. Departments of Interior and Commerce not to enforce laws to protect endangered wildlife, the U.S. Government is dooming to extinction hundreds of rare species.

Since 1600 A.D., over 228 species and subspecies of birds and mammals have become extinct. The vast majority of these exterminations have been the result of direct or indirect killing; for example, destruction of habitat, by man.

The United States, as the world's richest nation, has for years provided the major market for live animals and luxuries made from wildlife products, thereby creating a demand that has been destroying much of the rest of the world's wildlife. In order to stem the massive killing of and international trafficking in rare wildlife, several years ago conservationists began working for legislation to protect native endangered species and close off the U.S. market to such wildlife, in the hope that this would lessen the economic incentive for much of the killing or capture abroad of some of these species.

On December 28, 1973, a landmark piece of legislation—the Endangered Species Act of 1973—was signed into law. The enactment of this markedly strong bill followed a campaign of over 7 years by conservationists to have such a law passed, which replaced the virtually toothless Endangered Species Conservation Act of 1969. The new law greatly broadened the concept of endangered, and gave the Government much greater authority to protect, rare species.

But nonadministration of the law has rendered it nearly useless. Since the new Endangered Species Act was signed into law almost 2 years ago, a mere handful of species have been added to the U.S. Government's endangered list.

Until last week, not a single species had been added. I am confident that if these hearings had not been called, that situation would exist today.

Among the hundreds of imperiled animals that are unlisted, and therefore unprotected by U.S. law, are some 175 species on appendix I—the most endangered category—of the Convention on International Trade in Endangered Species of Wild Flora and Fauna.

This international convention was agreed to by the U.S. and about 80 other nations in March 1973 and was ratified by the U.S. Senate on August 2, 1973. The treaty went into effect around July 1, 1975. Despite the fact that the U.S. is obliged by Federal law and international treaty to protect these Appendix I animals, almost half are not on the U.S. endangered list. Nor has Interior or Commerce begun enforcing the convention by banning their import, thus leaving them vulnerable to continued exploitation.

Earlier this morning you heard testimony from the Deputy Assistant Secretary of Interior, Curtis Bohlen, who said the U.S. market is now closed for endangered species. I am greatly confused by this statement, because I know of no impediment to stop someone from bringing in one of these 175 species from abroad. I would very much appreciate it if the committee would seek clarification of that statement.

Let me get specific and talk about some of the animals which are on appendix I but are excluded from the U.S. list. First of all, there is the glacier bear, a small, bluish-colored bear highly sought by trophy hunters. It is still legally hunted in Alaska 10 months of the year, although only about 100 of these bears remain. The Interior Department has published an estimate that 500 remain. We think 100 is more accurate.

The clouded leopard and the marbled cat, two of the world's rarest cats are not on the U.S. list. The Caribbean monk seal, which is so rare that it has not been sighted in over 10 years, and may be extinct, is not on the U.S. list. The Asian elephant, which is known to be seriously endangered, can still be imported into the United States. This provides a drain on the remnant wild population, particularly since the normal way of capturing young elephants is to shoot the mother and any other members of the herd that that are present.

Other endangered and threatened species that are unlisted and therefore unprotected—most of which are on the convention's appendix II, the next most endangered category—include the Mexican wolf, down to less than 200 individuals, which sometimes wander into the United States to be shot by ranchers.

The chimpanzee, perhaps man's closest living relative, is seriously endangered due in part to the demand for specimens by medical laboratories and pet and wild animal dealers in the United States. Baby chimps are most actively sought, which are obtained by killing the mother and seizing the terrified infant. The Interior Department's Office of Endangered Species has prepared a report showing that the chimpanzee is in serious danger, but no action has been taken to protect it.

In response to these hearings, Interior is just now placing a few species on the endangered list, the first to be added since the act was passed almost 2 years ago. Included in this group are the Cedros Island deer, of which the Interior Department estimates less than a dozen are left—in Interior's own words—that "only two or three small remnant groups survive"; and the American crocodile—not to be confused with the alligator—whose entire population of less than 350 includes only about 11 breeding females.

For some of these animals, Interior's belated action has perhaps come too late. Once an animal is down to less than a dozen or so, it is usually too late to save the species, for it may by this time have already passed the point of recovery.

The Commerce Department has shown even less interest in the act than Interior, and is yet to add a single species under its jurisdiction to the lists.

In order to prevent species from reaching this point of depletion, the law also created a new list of threatened wildlife, animals that are likely within the foreseeable future to become endangered throughout all or a significant portion of their range. Only about nine species have been placed on this list, including the large species of Australian kangaroos and the grizzly bear. But Interior's regulations—while designed to limit the annual kill in Montana to 25 bears—would allow the State of Montana to continue selling about 1,000 grizzly hunting licenses each year, a figure which exceeds the

total number of grizzlies remaining in the lower 48 States, and seems guaranteed to result in their annihilation. Moreover, under pressure from the kangaroo hide industry, Interior also seems to be moving toward lifting its ban on the import of kangaroo skins, which had been flowing into the United States by the hundreds of thousands each year. We have learned that some Australian states plan to adjust their quotas of the number of kangaroos to be killed according to whether or not Interior's import ban is lifted. If the ban is lifted, this will drastically increase the number of these threatened kangaroos that will be killed in Australia.

I will submit for the record some data on this matter, including some very interesting correspondence between the Interior Department and officials of the kangaroo hide industry.

Much of the responsibility for the Interior Department's intransigence can be attributed to middle level officials in the Department's Fish and Wildlife Service, such as Associate Director Keith Schreiner, who have prevented or delayed the listing of countless species because of political pressure, economic considerations, or bureaucratic redtape.

For example, big horn sheep in the Western United States have been kept off the list because of pressure from the hunting/firearms lobby. Although hunting is a major threat to the survival of these animals, they are still eagerly sought by sportsmen.

Schreiner was recently quoted in an Interior Department publication as saying that, at the current rate of progress, it would take us 6,000 years to list the 200,000 full species of plants and animals that are thought to be threatened or endangered now. Interior is also recommending that Congress add weakening amendments to the act, which would seriously undermine its potential effectiveness.

This general situation has been brought to the attention of Assistant Interior Secretary for Wildlife, Nathaniel P. Reed, and Lynn Greenwalt, Director of the U.S. Fish and Wildlife Service. Both officials have endorsed the cautious, do-nothing approach, so as not to offend vested interests, such as the gun lobby, which are exploiting rare species.

Interior's policy has already had tragic and irreversible consequences, since it appears that several species of unlisted mollusks and crustaceans have recently become extinct. These obscure life forms are important not only as an indispensable part of the food chain and in maintaining the natural ecological balance. According to an Interior Department news release, they have recently been recognized as being able to produce antibiotics, tranquilizers, antispasmodics, and antiseptic chemicals in their systems. Scientists believe that these unique attributes can be used as model for the development of synthetic drugs. Thus, with the recent extinction of some of these creatures, a potential cure for cancer may have already been lost. Moreover, hundreds of endangered mollusks and crustaceans are still being kept off Interior's list, despite efforts by conservationists to have them protected.

To make matters worse, there are indications that Interior, under pressure from the gun lobby, may be moving toward removing the African leopard and the eastern timberwolf—found in Minnesota—from the endangered list, so that large-scale hunting and the im-



porting of trophies can be resumed. Already, Interior has taken the first step in the delisting process, and has announced a notice of review of the status of these species.

In addition, Interior is in the process of removing the American alligator from the endangered list throughout much of its range, in part to allow commercial alligator killing. This will result in the resurrection of the now moribund alligator hide market, which will bring about a return to large-scale alligator poaching wherever they are found.

The Interior Department's administration of the Endangered Species Act has been so irresponsible that Russell Peterson, Chairman of the Council on Environmental Quality, sent a letter on February 3, 1975, to Interior Secretary Rogers Morton—who is now Secretary of Commerce—charging that several policies being carried out by Interior are illegal. CEQ pointed out that Interior's proposed or adopted regulations for conserving kangaroos and grizzly bears did not provide these threatened species with adequate protection, and were "not consistent with the letter or spirit of the Endangered Species Act of 1973."

The U.S. Department of State has also questioned Interior's violation of U.S. law and international treaty obligations. On April 16, 1975, Acting Deputy Assistant Secretary of State Lindsey Grant wrote to Deputy Assistant Secretary of Interior E. U. Curtis Bohlen, urging Interior to comply with the Endangered Species Act and the Convention by adding appendix I species to the U.S. list by July of this year. Otherwise, warned Grant, "these discrepancies will cause trouble for both our Departments if they are not eliminated before July."

And on March 21, 1975, a letter organized by Senator Alan Cranston, Democrat of California, and signed by three other Senators—Warren Magnuson, Democrat of Washington, Philip Hart, Democrat of Michigan, and Robert Byrd, Democrat of West Virginia—was sent to Fish and Wildlife Service Director Lynn Greenwalt, expressing serious and urgent concern that Interior was not "pursuing the legislative intent of the act and its mandates \* \* \*"

The U.S. Department of Commerce has adopted an even firmer policy of virtually ignoring and not enforcing the Endangered Species Act. It has refused to list some species of dolphins—or porpoises—which are being wiped out by the hundreds of thousands each year by the U.S. Pacific tuna fleet, which intentionally nets entire schools of dolphins in the hope that yellowfin tuna will be found beneath them. Reports prepared by the Commerce Department's National Marine Fisheries Service—NMFS—show that one species of dolphin may be reduced by 30 to 80 percent, and that another may not be able to withstand further killing of this sort. Yet, NMFS Director Robert W. Schoning has refused to recommend these dolphins for the threatened or endangered list for fear that this will offend the powerful U.S. tuna industry.

NMFS has actively prevented Interior Department biologists from adding two appendix II species—the green sea and the loggerhead turtles—to the endangered list for almost 2 years. In a January 4, 1974, news release, the Interior Department proposed these turtles for the endangered list and pointed out that "green sea turtle stocks

in the Caribbean, once believed to have numbered at least 50 million, now are estimated at less than 10,000. Reproductive potential may be destroyed in the near future if present harvest levels are maintained." Soon afterwards, NMFS stepped in, claimed jurisdiction over sea turtles, and, under pressure from commercial interests, prevented action from being taken. On June 12, 1974, Howard Pollock, Deputy Administrator of the Commerce Department's National Oceanic and Atmospheric Administration, stated at a symposium on endangered species, "I see no reason in the world why the green sea turtle shouldn't be placed on the endangered list and I am certain that it will be. I would assume some action will be taken in the next 2 or 3 weeks."

Yet, 1 year and 9 months after the Interior Department's announcement, the turtles are still unlisted. All during this period, the United States has remained a major market for the sea turtles products, and has continued to exert a tremendous demand for their slaughter.

In last Sunday's Potomac magazine, I noticed that in a restaurant review, the restaurant was praised for having very good green turtle steak, which the proprietor called the veal of the sea.

The Departments of Interior and Commerce have now published a proposal to list the turtles as threatened instead of endangered, and to largely allow commercial imports to continue for at least 2 more years. But it is still questionable whether the actual listing will ever take place, and whether the proposed regulations will have any real effect in providing adequate protection to these endangered turtles.

The Washington, D.C., law firm of Hogan & Hartson is representing the fund for animals in an attempt to force Interior and Commerce to comply with the law and protect the species covered by the Convention before it is too late. As a result, some of these species are being proposed for the endangered list, but final action still remains in doubt. In the meantime, these species remain unprotected.

In numerous other areas, the Government has been derelict. Although the Endangered Species Act provides protection to critical habitat essential to the survival of endangered species, Interior is yet to identify any such habitat. Nor have any of the thousands of species of endangered plant life—such as certain orchids and cactus—been placed on the protected lists, even though the Smithsonian Institution has identified over 2,800 species and subspecies of endangered and threatened plants in the United States alone.

Nor has any real action been taken under section 8 of the act, which calls for Interior, through the State Department, to undertake financial and other assistance to foreign countries to help them protect endangered wildlife.

Other Government agencies such as the Army Corps of Engineers, the U.S. Forest Service, and the Bureau of Reclamation, are causing more direct and rapid elimination of wildlife by destroying the habitat of endangered species, even though this is ostensibly prohibited by the act.

The Federal Highway Administration of the Department of Transportation, in cooperation with the Mississippi State Highway Department is helping to build a highway directly through the last

remaining area containing the only known population of the endangered Mississippi sandhill crane, now down to about 40 birds. Interior is opposing the highway, but unless it is stopped by court action, the Mississippi sandhill crane is doomed.

Mr. Chairman, we are delighted that these hearings are being held. One Interior Department employee working on endangered species has commented that "if we get through those hearings unscathed, I fear the whole program is going to be dismantled." I, therefore, hope the Department's policies will be subjected to the intense scrutiny they deserve.

The New Endangered Species Act of 1973 is strong enough, if adequately enforced, to save many species of disappearing wildlife. Yet, despite the clear mandate of the law, countless species are going down the drain while indifferent Government bureaucrats look the other way.

That completes my testimony, Mr. Chairman. Thank you again for the opportunity to appear here today.

Mr. BREAUX. Thank you very much, Mr. Regenstein.

You talked on page 4 of your testimony, "But nonadministration of the law has rendered it nearly useless." Of course, the purpose of the hearings is to find out how it is being administered, whether it is being administered in the way the Congress intended.

That is an extremely strong statement.

How many species do we have on endangered species list? Not how many have been added, but how many were on it since enactment of the act?

Mr. REGENSTEIN. I believe there were either 112 or 116—there is only 1 list now—but there are 112 or 116 native endangered species and I think 320-some odd foreign endangered species.

Mr. BREAUX. Do you have any problems with the way those are being handled that are on the list?

Mr. REGENSTEIN. Well, we are very much afraid the Interior Department is moving toward delisting some of these species which are still critically endangered. I am not referring to the alligator in two or three parishes in Louisiana. I am referring to eastern timber wolf and leopard. Interior Department is under very strong pressure from hunting interests, from the gun lobby, to delist the leopard and timber wolf, and they have already started the process rolling and publishing a Notice of Review of these species.

Mr. BREAUX. Do you think there is any difference in information and data that is required to list an animal from that which would be required to delist or change the listing of the species?

Mr. REGENSTEIN. Well, that is a tough question to answer, Mr. Chairman. If we err, I think we should err on the side of safety to the species. If we make a mistake and keep an animal on the list too long, maybe some commercial interest will be inconvenienced, but if we err by taking an animal off the list, that is still in serious danger, and we lose that species, it is gone forever, so I would say that in general I think there should be adequate information in both cases; but, you know, you have human beings making subjective judgments, and if they err, I would like to see them err on the side of the animal.

Of course, I do not think there should be any errors.

Mr. BREAU. Is it your feeling that the law requires that there be immediately placing of every animal or species on the international treaty list—that there should be a requirement that it be immediately placed on the U.S. endangered species list.

Mr. REGENSTEIN. I think basically yes, but the problem could be solved tomorrow, Mr. Chairman, if the Interior Department would issue immediate regulations banning the import into this country of the 174 or 175 species on appendix I and then they could proceed with however long it takes to do the actual listing. In the meantime, these animals are subjected to extreme danger by the fact that they are not being imported in this country.

In the case of the glacier bear, I am not sure how much longer that bear has got.

Mr. BREAU. You bring out an interesting point, and one that I do not clearly understand. I have been told the animals that are on the international treaty list as endangered cannot be imported to this country, is that not correct?

Mr. REGENSTEIN. Mr. Bohlen indicated that, and he made the statement that the U.S. market is closed off to endangered species.

Mr. BREAU. That is what I heard.

Mr. REGENSTEIN. I would very much appreciate this committee asking him to clarify that. Because it is my understanding, well, perhaps whoever is here from Interior today can tell us, but I do not know anything in the world that would prevent you from bringing clouded leopards into this country, Asian elephants, or any other animal on appendix I. I think the U.S. market is still wide open for most of these appendix I species. I hope somebody will correct me if I am wrong. That is what I have been told.

Mr. BREAU. Well, we are going to have another session on Monday, a question and answer session. It is something that needs clarification. It does present a problem. It is a very crucial question. Your concerns and my concerns in that line and my concerns in some other lines too, and it is a very crucial point.

We do have a quorum call. Mr. Emery, we will go until the second bill.

Mr. EMERY. I just have one question. It will not take too long.

On pages 4 and 5 and also on page 11, you indicate that the United States has committed to protecting a certain list and that as a matter of fact only half of these species appear on the endangered species list.

Further, on page 11, you indicate that the State Department has its problems because we have not in fact lived up to our treaty agreements.

Can you elaborate on that, tell us what kind of problem we are having with what countries, and do we have any information that would indicate the problem does exist and that the State Department and Interior are at odds?

Mr. REGENSTEIN. I will submit for the record a letter from the Department of State. It is to Mr. Bohlen, Deputy Assistant Secretary of Interior from Acting Assistant Secretary of State Lindsey Grant. He wrote it on April 16, 1975, to the Interior Department and he urged them to comply with the act.

[Letter referred to follows:]

BUREAU OF OCEANS AND INTERNATIONAL  
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS,  
*Washington, D.C., April 16, 1975.*

Mr. CURTIS BOHLEN,  
*Deputy Assistant Secretary for Fish and Wildlife and Parks, Department of  
Interior, Washington, D.C.*

DEAR MR. BOHLEN: As you know, ten states have deposited instruments of ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora in Bern as of April 9. The Convention will, consequently, enter into force in July, after the statutory 90-day period.

I hope that Interior will use this period of grace to reconcile some of the differences between the convention and our own Endangered Species Act of 1973. There are, of course, considerable discrepancies between the two—particularly in the separate lists of endangered animals which accompany the Act and the Convention. These discrepancies will cause trouble for both our Departments if they are not eliminated before July.

The Convention, Article IX (2), requires that the depository nations designate, and make known at the time they deposit their instruments of ratification, a Managing Authority within each of their governments which would serve as a focal point for convention-related matters. We have not yet done so, although the Endangered Species Act of 1973 in Section 8(e) endorses this requirement. So far as I know, all interested Departments agree that Interior is the appropriate Department in which to lodge this Authority.

With best wishes.

Sincerely,

LINDSEY GRANT,  
*Acting Deputy Assistant Secretary  
for Environment and Population.*

Mr. REGENSTEIN. Well, he says that these discrepancies will cause trouble for both our departments if they are not eliminated before July.

That is about as strong as the State Department ever phrases anything if you have had experience with them.

I find it totally inconceivable, Mr. Emery, that the Interior Department has done absolutely nothing to protect the species while they are going through the listing process. They have now proposed many of the species, and the Commerce Department has not even done that.

The reason they proposed these species is because the Fund for Animals was fortunate enough to retain the services of a very fine law firm here in Washington, Hogan & Hartson, who is representing us on a voluntary basis and threatened to go to court if Interior did not begin action.

There is absolutely no reason in the world by tomorrow that they cannot issue regulations banning the import into this country of these species.

Mr. EMERY. Thank you very much. We do have a quorum call.

Mr. BREAUX. Thank you.

I have purchased your book. Before I had a chance to read it, my staff man took it and he is in the process of going through it, and I look forward to looking at it afterward. We might have some chats about migratory waterfowl—

Mr. REGENSTEIN. I am flattered. I will make sure you get another copy. I would hate for anyone to be denied the information in the book.

Mr. BREAUX. The subcommittee will stand in recess until immediately following the roll call.

[Short recess.]

Mr. BREAUX. The subcommittee will come back to order.

Our next witness will be Mr. Thomas Wilds, president, National Congress of Animal Trainers and Breeders.

Mr. Wilds?

# **STATEMENT OF THOMAS WILDS, PRESIDENT, NATIONAL CONGRESS OF ANIMAL TRAINERS AND BREEDERS**

Mr. WILDS. Mr. Chairman, my comments are already brief and to the point.

I understood that I have only 7 minutes to speak so if I could go through them, completely.

Before I begin my comments I would first like to state that I am a professional wild animal trainer, specializing in large mammals.

I appear before you today as the president of the National Congress of Animal Trainers and Breeders, Inc., a nonprofit corporation with offices here in D.C. and also Florida and California.

I am involved with these Federal animal control laws, as are many thousands of my fellow animal trainers and breeders, because of the concern we feel for the endangered, threatened, and mistreated animals of the world. Also, because we feel that many of the new Federal animal laws infringe upon our constitutional rights as American citizens.

The Endangered Species Act of 1973, as we know, was written to uphold the United States part of the International Convention on Flora and Fauna.

It is our feeling that the Endangered Species Act, as a law, is a badly needed one. The major problems originating from the act appear to us to be created by the administration of the law.

Many examples can be noted to uphold the above remarks. I have a few here, to emphasize the point.

One. Less than 7 years ago there was major concern over the survival of tigers. There are this day, or last week, I should say, more than 175 surplus tigers within zoos, breeding compounds and circuses in the United States.

Where do 175 surplus tigers go? What is to be done with them? Or more importantly, why are they surplus?

One reason is because permits have not, or will not be granted by the Department. It is true that the animal facilities in our country cannot absorb the surplus animals. However, it is a well known fact that more than 70 zoos and trainers in Europe and Asia are in the market for tigers now. It is also a fact that some are importing tigers from the wild.

Under the law as it is being administered at the present, the only right the owner of an endangered species has is to feed and house the animal. It is true that it is not illegal to breed endangered animals, but why should any owner attempt to breed without any but the slightest chance of receiving a permit to ship or sell the surplus stock?

Two: On the other side of the coin, from the above example, we find most European and Asian zoos with extremely rare animals and little breeding success. Why there is only a small amount of success overall in breeding animals outside the United States is not fully

known to me—unless they are not willing to expend the money and energy needed for research and necessary facilities.

All of you have received, from my office, a copy of a letter from Dr. R. Faust, director of the Frankfort Zoological Garden. In the final paragraph he states:

I must admit, however, that I do not really like to sell them to the United States as it always takes an endless time until the import permit for animals is issued by your competent authorities. In a similar case we had to wait for this import license a whole year, and you will certainly understand that such a wearisome procedure is impossible for zoological gardens in the long run. It involves considerable problems with respect to further breedings. On that account we are not in a position to do business transactions with the United States unless it is guaranteed that the import license will be issued within a reasonable period of time.

This same attitude seems to prevail in most European zoos.

I do hope that you have taken the time and opportunity to read this entire letter. It was, as you may remember, written to Mr. Robert Baudy, who owns and operates America's most successful breeding compound.

It seems a shame that American zoos and breeders, by far and away the most advanced in the world, are not able to obtain animals for the propagation of endangered species. It is interesting to note that the Amurian leopard, which was the actual subject of the letter, number only about 30 in the world. (Mr. Baudy has had considerable success breeding the Amurian leopard in the past.)

The unfortunate fact, once again, is that the slowness or impossibility of permit issuance has endangered the endangered animals.

The Department of the Interior is not able to disclose the number of applications received—either domestic or international—or the number of permits granted.

However, I think it would be very interesting to find out.

A third point of concern is traveling endangered animals. Such animals as tigers and leopards, for example, move throughout our country entertaining within their role in the American circus. These animals and their owners have spent the past year and a half working under the dark cloud of wonder and fear.

That is, wondering if the Interior Department's Law Enforcement Division was going to actually enforce the law with regard to them, and in fear that this enforcement would put an end of their hard working, honorable profession by disallowing the right to travel interstate.

I understand, at this time, that the USDI has proposed rule changes which will allow permit-free interstate travel for endangered animals, provided there is no sale or trade involved. Although I have not had a chance to go over this proposal in detail, I do certainly approve of it in principal.

One other note on traveling animal acts: Even in this day and age, the American circus still is the only major entertainment for millions of Americans outside of our major cities. The circus is, to many, the only way to see some of the vanishing species—it remains one of the most affordable and accessible means of appreciating exotic wildlife.

I have briefly touched upon just three of the major areas of concern created by the administration of the Endangered Species Act.

Now, let us look at one relatively simple means to correct the outstanding problems of permit issuance, transportation and interna-

tional concern for rare animals, including the overwhelming surplus of captive bred endangered animals.

Captive breed is the key to all the aforementioned problems. What detrimental effect do captive bred endangered animals have upon the wild population of endangered animals?

Allow me to answer my own question—none. The only effect that captive bred endangered animals will positively have on wild populations is the possible restocking of them.

The fact of the matter is that captive bred animals are the future of exotics in the wild. Without a progressive breeding and restocking campaign, many of the now endangered species of animals will soon be extinct in the wild.

I wish to propose, at this time, an amendment to the act of 1973 which will allow captive bred endangered animals free movement. It also will allow breeders of these rare animals the opportunity to save, and even replenish our wildlife.

The law should be amended to allow for unrestricted freedom of transportation, trade and sale of all captive born species. The law should now be changed to provide for the following: (1) the free interstate transportation, trade in and sale of captive born endangered species between bona fide zoos, trainers, dealers, circuses, breeders, game preserves, scientific and education institutions in this country; (2) the free exportation, importation, trade-in and sale of captive born endangered species between bona fide zoos, trainers, dealers, circuses, breeders, game preserves, scientific and educational institutions between this and foreign countries.

The board of directors and our membership believes that these changes should give the Federal law enough latitude to allow those in this country dedicated to the future of wild animals, to once again operate successfully, without harming the intended purpose of the act; which is the protection of endangered animals in the wild—a matter of great concern to all of us.

I would like to make one other comment.

It seems to be the feeling of many in the USDI, and outside groups, that a person should not be allowed to make a profit in selling or dealing with endangered animals.

I would like to remind these folks that the country was founded, and flourishes today upon the free enterprise system.

A profit, or money, is the only reward a person can get for the endeavor that he accomplishes well. And even nonprofit organizations have to at least make ends meet.

A private breeder of endangered animals does a good job, and does it successfully, because he works at it for 12, 14, 18 hours a day, and the price that a rare animal brings is only part of the reward for his efforts.

Thank you.

Mr. BREAU. Thank you very much, Mr. Wilds.

Our committee appreciates your testimony, and you have shared with us some of the problems that your industry experiences.

I would like to know if you would be prepared to comment on some of the suggestions that you have on page 4, as to the ways the law should be amended, to provide and allow for the exchange and transportation of captive animals.



Mr. WILDS. If I may, I would like to add one thing in there, that Mr. Baysinger and I were discussing earlier within this amendment, which I do feel would do a great deal to replenish the stock of endangered species in the world. There also should be a clause stating in some manner that these animals are to be bred and available for sale, not for the purpose of eventually being killed in a hunting preserve, or game reserve, or somehow going around the barn and ending up as a fur coat, which would certainly accomplish nothing but more trouble.

I think this would be an important thing that should be included.

Mr. BREAU. It is my understanding now that you have the right to exchange with other zoos, and other institutions, but not for sale of the animals in your case, is that correct?

Mr. WILDS. To perform any transaction where there is money involved, or a profit involved, you would have to get a permit.

Permits in the private sector seem to be very hard to come by for some reason.

Mr. BREAU. Are you allowed—I am asking for my own information now, are you allowed to exchange animals if there is not any profit involved?

Mr. WILDS. Yes.

Mr. BREAU. Without getting a permit?

Mr. WILDS. Without any permits.

If I am breeding snow leopards in a commercial enterprise, I am certainly not going to give away my crop, which would, you know, bring no money in to keep the parents of the young. It is putting the private breeders out of business, and I think your private breeders are the most successful in the world.

Mr. BREAU. Thank you very much.

Mr. Emery?

Mr. EMERY. Thank you very much, Mr. Chairman.

I do not really have a series of questions on the subject.

Frankly, it is one I have not considered until you brought it up, and I think the Congress feels the same way.

Obviously, my primary concern might be to protect the wild stocks of the endangered animals, the snow leopard, or other animals, whether found in the wilds or the zoos.

Has it been shown that once an animal has been kept in captivity for awhile it loses many of its traits, and that, it is not readily practical to think that we might be able to restock the areas of the wilds with tigers as we now stock trout streams?

Mr. WILDS. No, sir; not at all. It is not impractical in the least.

It is strictly a matter of how you raise the offspring. If you were to take an area, let us say 10 acres, fence it in securely, put in productive pair of—well, to use another animal, black jaguar, let them breed and produce their offspring.

When the offspring are old enough, move them from their parents, so the parents will once again breed. Raise the offspring in a separate large area.

Now, presumably when you remove them, they are eating solid food. At that point you would gradually turn them from a diet of solid foods—bowl of meat—gradually to the point where they learn to catch their own rabbit or chicken, for instance.

Mr. EMERY. Is it not necessary for the parents to train the offspring?

Mr. WILDS. No.

Mr. EMERY. To fend for themselves in the wild?

Mr. WILDS. No, I do not believe it is. Because a great deal of that is inborn.

Mr. EMERY. This is a key point. Maybe I have been watching "Wild Kingdom" on television too long. I do not know, but it has been my impression that for the wild animals to survive, that they have to be raised and trained by its parents in such a way that they become familiar with the habitat in which they live.

How are you going to teach a lion or cheetah to bring down a gazelle, if the parents are not around to teach these natural skills?

Mr. WILDS. Well, you would have to substitute something else for a gazelle. Something that was readily available. Perhaps a goat, and I imagine I am going to get in trouble for suggesting, allowing the wild animal to kill a rabbit or goat.

However, that is what happens in the wild. I do not really see the difference. Especially what you are considering by it.

I cannot remember all the facts off the top of my head, but several years ago a breeder in Florida was required to supply a group of serval, which is a smaller cat, similar to the cheetah, to restock a diminished population.

This particular breeder brought these animals up, and had them eventually killing and eating rabbits. He shipped the animals to whatever the country was that requested them, it was a commercial sale, and about 3 months later, he received a letter from this country thanking him, and stating that the animals are doing very well in the wilds, and they have not had any problems at all with their being reintroduced.

It is something that could be done. If I said earlier it could easily be done, I would like to correct myself. It is not anything that could easily be done.

But I am sure, as you notice, with wild animals there are very few things that can easily be done. That seems to be something that is true legally, and with the animals also.

The animal business is a complex business, and therefore, to regulate it it becomes complex, too.

Mr. EMERY. The questions are asked because I am ignorant of this. I do not really know what is involved.

It is a fascinating possibility that this committee and other agencies ought to look into, to determine at least if it is practical.

Mr. WILDS. I would like them to look into it, it is something that I am sure myself can be done, and can be possible to the animal world, and should you folks or another agency like to look into it, I would be more than happy to offer my services and the services of my colleagues to your organization to help in any way we possibly can.

Mr. EMERY. I would like to have any information that you might have, or some of your associates might have. The practicality of the feedstock.

Mr. WILDS. I will see that you get it.

[The following was received:]

NATIONAL CONGRESS OF ANIMAL TRAINERS AND BREEDERS, INC.,  
*Washington, D.C., October 9, 1975.*

House of Representatives,  
*Committee on Merchant Marine and Fisheries, Longworth House Office Building,*  
*Washington, D.C.*

Re Your request during oversight Hearings, October 1, on the Endangered Species Act of 1973.  
 (Attention Committee Chairman).

Upon the careful study of the new rules and regulations as published Sept. 26, 1975 by the Endangered Species Office, Dept. of the Interior, and with regard to the National Congress of Animal Trainers and Breeders' opinion on these new rules; I have contacted several public servants in the Endangered Species Office of the Dept. of the Interior and it seems that each individual had his own interpretation of the new rules and their effect on the transportation of Endangered Species as long as they are *not* for sale or trade.

So, without a valid interpretation of the meaning, from the Dept. of Interior, I shall state our opinions based on the subject matter available in the Federal Register of the 26th of September.

Apparently, the only reference to the changes allowing for "free" transportation of endangered animals appears in the definition of "Industry or Trade," in which it states: "Industry or trade in the definition of 'commercial activity in the act means the actual or intended transfer of wildlife or plants from one person to another in the pursuit of gain or profit;'"

We interpret this to mean that any endangered animals may be moved across state lines, imported or exported, as long as there is no commercial sale or trade or barter. This does solve part of the problems of our membership. It does allow performing animals to move interstate in the course of their activities in the American Circus. (Although, I find no mention of whether or not trainers still need permits to travel with their animals.)

Unfortunately, this rule change does in no way help the private wild animal breeders in this country. The Law still, at this time, does not allow private breeders the ability to sell or trade their crop for a profit in order to continue to operate.

American breeders are the largest source of endangered animals in a captive state. These hard-working people and their honorable profession should be rewarded, not driven to the brink of bankruptcy by a law that is meant to protect and preserve these beautiful creatures.

In short, these rule changes are a help to a portion of our membership, (and it may be pertinent to note here that this portion of members will, one day, have to replace animals within their acts deceased of natural causes,) however; the captive breeding of endangered species is the future of these animals, in both the wild and captive state, and private breeders are the people who *hold* this future.

Respectfully submitted,

J. THOMAS WILDS,  
*President, NCATB.*

Mr. EMERY. It might be important to bring back some of the species.

Mr. WILDS. I think that is the key, to do it.

Mr. EMERY. Thank you very much for your testimony.

Mr. BREAU. As one who saw Born Free about 15 times with my children, I think I recognize the problems about readapting animals to the wilds.

Mr. EMERY. In fact, I had exactly that movie in mind when I asked that serious question, because it did point out some of the serious problems that I naturally assumed were true.

Mr. WILDS. At some point you have to separate reality and theatrics, and what brings tears to your eyes in a movie is not what is necessarily true in the wilds.

Mr. BREAU. I did not bring it up for that point.

I think one of the problems is that maybe, Mr. Emery, as you were really agreeing, I might add that it seemed that one of the problems,

that the animal is raised in captivity, to release that animal to the wilds is a serious mistake.

To take a cub or an animal that is not used to being raised in the wilds, and returning them to the wild at an early age, I think their early instinct projects that problem.

Mr. WILDS. You could not possibly take a 15-year-old tiger and ship him to India and expect him to live more than 2 or 3 days.

Mr. BREAUX. I think counsel has questions.

Mr. SPENSLEY.

Mr. SPENSLEY. Mr. Wilds, I just wanted to ask for your suggestions.

I think you probably understand that the way the law is written now, it does not make a differentiation between animals that are born in captivity, and those in the wild.

I think the philosophy behind that is the attempt to destroy the market for endangered species, and if you destroy the market, it makes no difference whether they are caught in the wild or they are captive bred.

If you do make a distinction, then you have to have an administration system to enforce the provision, and I think the argument is you encourage smuggling, falsification of records, and all of the attendant problems.

I think a parallel problem that we found in the endangered species is the disposing of whale oil—are there any suggestions that you would like to make to us now, or perhaps you could give them in writing at some other time, as to how we might solve that problem?

Mr. WILDS. I can touch on that right now, because I have discussed it at some length.

To begin with, it would obviously encourage some—shall we say black market activities?

The endangered Species Act, as it stands right now, is encouraging some black-market activities, so I do not think you are going to lose a whole lot.

There can be a system easily set up, and it is set up at this point in other departments for inspection regulation of animals.

The Department of Agriculture Animal Welfare Act, as it is functioning now, could easily set up, and it is set up at this point in other departments for inspection regulation of animals.

The Department of Agriculture Animal Welfare Act, as it is functioning now, could easily function to inspect and control your breeding compound and your breeders. Because they are inspected now by the Department of Agriculture.

That, and a few forms, and some paper work, registering your breeders, and registering your young, let us say, 6 weeks of age, where their survival is pretty much guaranteed, they are past infancy in a way of speaking, it would create more paperwork, but it could be done with a reasonable, or a good deal of success.

I am not saying that any system is 100 percent, and I am quite sure this is not either, but something could easily be worked out.

Mr. BREAUX. Fine.

Mr. WILDS. Well, the first part of the comment about the—of your comment about the Endangered Species Act, not making any—what is the word—it does not separate captive born from the others,

and the idea was to squelch commercial activity, I believe that is generally what you said.

Because the United States and others—18 other countries could not possibly control all of the animals that are endangered. The only way you are going to accomplish this whole endangered species thing is to have every country in the world a member of it. Otherwise there is going to be a country somewhere that is going to allow an animal, and let us use the jaguar, for instance, to become extinct.

At that point, no matter what you do, the jaguar in the wild is extinct, and if you do not allow the breeding of it in captivity it could become extinct in captivity, whereby your captive breeding program could not restock this wild population, should the country ever see the light, but it will guarantee a continuing group of these jaguars in captivity, and seeing a live animal, being able to see it moving around and jumping, and such as this, sure is better than looking at a movie or pictures, in my opinion.

Mr. BREAUX. Thank you.

I think the minority counsel has a question.

Mr. MANNINA. You indicate in your testimony that you have not had an opportunity to look at the new Interior Department regulations.

Could you submit for the record how these evaluations will affect you and your colleagues.

Mr. WILDS. Yes.

[The information was not received at time of printing.]

Mr. BREAUX. Our next witness will be Rev. L. David Harris, chairman of the Endangered Species Committee of the Circus Fans of America.

#### **STATEMENT OF REV. L. DAVID HARRIS, CHAIRMAN, ENDANGERED SPECIES COMMITTEE OF THE CIRCUS FANS ASSOCIATION OF AMERICA**

Mr. HARRIS. Thank you for allowing me to address you.

A number of my parishioners are animal trainers and I came into this whole arena of activity in that manner, and eventually I became interested even in the formation of a National Congress of Animal Trainers and Breeders.

I wanted to talk specifically about an area of this act which affects many of the people that I am concerned with and who have come to me with their problems, and that is, and these people are animal trainers employed by circuses and who in some way or another have animals covered by the Endangered Species Act.

These are the people who really have to live with this legislation.

We are talking now specifically about such animals as tigers, leopards, cheetahs, jaguars, orangutans, and animals such as this.

Most specifically there complaint is that at least up until almost a week ago they really did not qualify under the law to get permits to continue their profession and they felt this was unfair because they could not see nor can I their profession in any way endangering the species that they have and as the act was written, they did not qualify for permits, but they were allowed to apply for them and then once they had applied for them they were able to transport

their animals, although their permit applications had not been acted upon.

Now, it's my understanding this has been changed and as of the last word of the amendment having to do with captive bred species under the new wording, under the new rule changes, in terms of captive bred species, these can be moved across State lines now and this will be a great help to circus trainers and circus performers.

I think what I would like to advocate is that since the structure or, you might say, the enabling rules are there to move some of these animals from the endangered to the threatened list, that this be done as expediently as possible.

Mr. Wilds testified earlier that some people have to live with this legislation.

In States there is almost a fear that at some point some inspector will really "enforce the law".

That is, step in and say, you do not have a permit, you are out of business.

At present, they do exist just literally under the grace of the department.

So, since these rules have been changed, they would be very appreciative if this could be acted upon and expedited so that in particular in the case of tigers, that these can be moved across the State lines, and the people who are moving them do not feel in any way whatsoever that they are breaching any kind of law or committing any act of bad faith.

The other thing I want to point out, and I point this out in my testimony, in my dealings with animal trainers and breeders, I really feel, as Mr. Wilds does, that if you are seriously considering this endangered species, that serious thought and consideration be given to the resource that you have among trainers and breeders who deal with endangered species and who can breed them.

I think this is a resource that simply has not been observed as it could have been or should be.

I think that animal trainers, and I am speaking now of my personal friends, have a genuine concern about endangered species.

I think that is obvious by the fact that the very animals they have live longer than animals in the wilds. They do not want these species to become extinct any more than anybody else does.

They have literally years of training and experience with these animals and I feel they could be utilized more than they are.

I would like to second Mr. Wilds' proposal that transportation be allowed among captive bred endangered species; that they can be bred; that they can be utilized for commercial activity which would in any way endanger the lives of the animals.

I think any other comments I would make are in my proposals in the statement and I would advise you to read them.

Thank you again.

Mr. BREAUX. Thank you very much.

You pointed out some most interesting problems.

What does the circus do now when their supply of lions or tigers would ever be depleted?

Mr. HARRIS. It is a genuinely difficult thing.

First of all, and again I want to say I think this has been changed somewhat by the changing rules, but up until last week any circus

in the United States that had tigers could literally have been stopped in its tracks because under the law they do not qualify for a permit to take their tigers across the State line and so as a result, since they do not qualify to take their tigers across the State line, if they run out of tigers under the law as it was, they could not purchase any more. It is considered a commercial activity.

In the same way, if a person wants to become literally a wild animal trainer, and I am thinking of a couple of families where this has something that has been pursued generation after generation after generation, in some cases this is very difficult for a young man to pursue what his father once did, because he knows that once the animals die there will be no way that he can get more.

I am thinking now of the families that have orangutans.

In some cases there are families where they have been tiger trainers for literally generations. They have no way to replenish their stocks

Mr. BREAU. Well, what interpretation or, rather, what is your interpretation of anything that we have had that would now permit some relief of the problem that you are talking about?

Mr. HARRIS. Well, the way I understand it, the change which has occurred is, and again I would yield to Mr. Baysinger as someone who can explain this with greater clarity than I can, but I understand under the new rule it changes that.

First of all, captive bred species can be moved across State lines if they are moved in a manner which is humane and passes inspection and so on.

Mr. BREAU. That does not solve the problem of replacing the animal.

Mr. HARRIS. No.

It does not.

But, also, I understand that, and again I would appreciate some clarification from Mr. Baysinger, but I understand that some animals can be purchased.

Now, presently they can be purchased if you live within the State where you are purchasing.

Now, in my case, for example, if I wanted to purchase a tiger and continue my training—I am not a tiger trainer, incidentally—but, if I wanted to purchase a tiger to continue my training, I would have to do so by a tiger breeder in the District of Columbia, because that is where I live.

So, if there was a tiger breeder in the State in which I live I could purchase one.

In some cases, in order to replenish my supply of animals I might even have to change my place of resident to move into a State where they are being bred and, of course, the other part to all this, and I think Mr. Wilds alluded to this, that to a certain extent, when the profit incentive is taken out of the breeding of these animals, then literally you cannot even find them to purchase.

I do not think any trainer or any respectable breeder that I know of would advocate in any way breeding animals for, let us say, the purpose of hunting them down or for slaughter or for fur or for anything else.

I do not think any of us are advocating this.

But I think there are reputable breeders who would breed simply for the purpose of keeping a supply of these animals in existence.

But, they are very, very difficult to find because the profit motive is no longer there and they simply do not have the money to continue their compounds and, secondly, even if you do find them, if you do not live within the State they are located in, you cannot purchase from them.

It is really a precarious thing and I feel that some of the rule changes that have been made have certainly helped.

However, I am like a number of other people. I have not had a chance to study them in detail. I really feel they have helped and I think they are a step in the right direction.

I am not certain yet that they are everything that needs to be done.

Mr. BREAUX. I have a great deal of sympathy for your problem.

One of the areas we will explore further with the Department would be those new rules and the problems you are having.

Congressman Emery.

Mr. EMERY. No questions at this time, Mr. Chairman.

Thank you.

Mr. BREAUX. Any questions?

Mr. MANNINA. Yes.

When you have had an opportunity to review those regulations in detail, could you submit to the Committee your specific comments on their adequacy from your standpoint?

Mr. HARRIS. I will appreciate it.

I would also state to you that I am sure that even when I review theme, I would like to talk a little more to the Department of Interior people, who I am sure could explain them to me in more depth than I as a layman can handle.

But, I would appreciate the opportunity to get back to you on it.

Mr. MANNINA. Thank you.

[The information was not received at time of printing.]

Mr. BREAUX. Perhaps Mr. Baysinger from the Department would want to comment on that.

We would certainly benefit if he is ready to comment on those points.

Mr. BAYSINGER. Thank you, Mr. Chairman.

I think I could make a couple of comments that are germane.

First, I am Earl Baysinger, Assistant Chief, Office of Endangered Species and International Activities, United States Fish and Wildlife Service.

We very recently revised final rules, as a matter of fact, last Friday, which ease some of the problems these gentlemen perceive.

We recognize that they are real problems.

First, the Endangered Species Act of 1973 places limitations upon certain activities that its predecessor did not.

For example, you cannot move listed species across State lines under certain circumstances without a permit.

We have heard a great deal from previous witnesses about permits which are not available. In fact, permits can be obtained, but only for scientific or propagative purposes or to enhance the survival of the species. We recognize that in many cases, such as zoos, circuses, or other commercial operations that the availability of permits has been limited.

These new final rules, which will have an impact on the alligator, also redefine the term "commercial" as it relates to the term "industry



and trade". I'll just read that definition from the rules, if I may. It is very brief.

It says: "Industry and trade in the definition of commercial activity in the Act means the actual or intended transfer of wildlife or plants from one person to another person in the pursuit of gain or profit."

Basically, if you are moving species across a State line for commercial purposes without intending to sell or transfer, then a permit is not required. This relieves some of the pain that circuses feel.

In addition, these regulations utilize a concept that has been testified to before the Committee previously, that of a captive self-sustained population. The regulations recognize that although a species such as the tiger may be critically endangered in the wild, it exists in this country as self-sustaining population.

In other words, there are presently enough tigers in this country so that even if we were to close our borders to further importation, there probably would continue to be captive tigers in this country as long as the people that have them let the tigers do what they want to do and thereby produce more tigers.

Basically, we are setting up a system whereby a group of animals being bred in captivity in sufficient numbers to maintain the size of that population can be designated a captive self-sustained population. That particular population could then be reclassified to the "threatened" status, thus permitting the issuance of such regulations as are necessary for the conservation of the species, as opposed to the statutory limitations applicable to an endangered species.

In summary, if a captive, self-sustaining population of tiger or other endangered species were identified we could reclassify that population as "threatened" pursuant to Section 4.

The regulations that would follow would enable qualified persons, such as breeders, to buy or sell them with little if any red tape.

Although we are still in the process of defining the details of the permit forms and procedures, information has been entered into the record setting forth comments we have received on these proposed procedural regulations.

We think the form would probably be filled out by the seller himself, countersigned by the buyer, with a copy provided to the Service.

When the system is instituted, we think it will solve most of the problems in moving those species that are, in fact, being bred in this country.

There remains a number of species, one mentioned earlier being the orangutan, which are not being bred in numbers sufficient to achieve self-sustenance. We intend to retain the current degree of control over these species to insure that they are in the hands of people who are properly breeding and propagating them, until they attain the status of a self-sustaining population.

In summary, the Act provides some relief in the form of Section 10 A permits. The re-definition of the term "commercial activity" provides to move animals across State lines if no change of ownership is involved.

And, of course, there is the captive self-sustained population. I think, frankly, this will solve many, if not all, of the problems alluded to.

Mr. SPENSLEY. Is that a final regulation?

Mr. BAYSINGER. That is a final regulation dated last Friday, September 26.

Mr. BREAU. It looks like it has addressed some of the problems head on.

I do not know if this solves them all.

I think it certainly is an improvement over the other situation we had before.

I think the Committee probably would appreciate both Mr. Wilds who was a previous witness, and you, Reverend Harris, after you have had an opportunity to look the regulations over, to give the Committee the benefit of your thoughts on it, after you have had a chance to look at it in detail.

Mr. HARRIS. I think after what Mr. Baysinger said, I would add two things quickly.

First of all, what he said does reflect the fact, I find, that the Department of Interior has been responsive to some of the things we have been concerned about.

The very fact that they have addressed these things, I appreciate it.

Secondly, it does not alter the fact that I would very much like to see this Act acted upon immediately. That is, make these threatened designations as soon as possible, because it would be a great help to us.

Mr. BREAU. Thank you very much.

Thank you, Mr. Baysinger.

Our next witness will be Dr. Charles Boas, President of the North American Operating Corporation.

Mr. HARRIS. Sir, I can speak for Dr. Boas.

Unfortunately, he and his farm were caught in a flood last week in Pennsylvania and he could not get out of his community because of National Guard helicopters and so on.

It is a disaster area.

He and Mr. Meltzer both regret the fact they cannot be here for that reason.

Mr. BREAU. This will conclude the list of witnesses.

The Committee will stand in recess until tomorrow morning at 10:00 a.m.

[Whereupon, at 4:30 o'clock, p.m., the Subcommittee on Fisheries and Wildlife Conservation and the Environment adjourned.]

# ENDANGERED SPECIES OVERSIGHT

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THURSDAY, OCTOBER 2, 1975

U.S. HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON FISHERIES AND WILDLIFE  
CONSERVATION AND THE ENVIRONMENT OF THE  
COMMITTEE ON MERCHANT MARINE AND FISHERIES,  
*Washington, D.C.*

The subcommittee met, pursuant to recess, at 10 a.m., in room 1334, Longworth Office Building, Hon. Robert L. Leggett, chairman, presiding.

Mr. LEGGETT. The Subcommittee on Fisheries and Wildlife Conservation and the Environment of the Committee on Merchant Marine and Fisheries will please come to order.

We know the absence of a minority member, but we will have one here shortly.

We will begin this morning with the general oversight hearings on endangered species legislation.

We had a hearing yesterday, which was conducted partially in my absence due to the conflict of the floor of the House.

This morning we will start off with representatives of the Zoological Action Committee, Inc., George Steele, executive director, and Gerald Lentz, manager, zoological operations, Busch Gardens.

George, we have your prepared statement, that will go into the record, and Mr. Lentz, your statement will go into the record also.

We have a lot of witnesses to cover today, and we have a limited amount of time, so if you can emphasize portions of your statement, it would help us here.

## STATEMENT OF GEORGE STEELE, EXECUTIVE DIRECTOR, ZOOLOGICAL ACTION COMMITTEE, INC.; AND GERALD LENTZ, MANAGER, ZOOLOGICAL OPERATIONS, BUSCH GARDENS

Mr. STEELE. Mr. Chairman, my name is George Steele. I am executive director of the Zoological Action Committee, a national political action organization representing zoological institutions, both public and private, zoological suppliers, private wildlife breeders, and individual citizens interested in preserving and promoting zoos.

We appreciate the opportunity for me and the other spokesmen representing the zoological community to appear before you to detail some the main problems we have encountered under the Endangered Species Act of 1973. If I may, I will summarize for the committee, in general terms, the points the zoological community

feels are important and should be given consideration after these hearings.

First, let's recall the purposes for which this act was passed, as the legislative history indicates. Quite simply, the Congress wanted to prevent any more species of animals from being wiped off the face of the Earth for whatever reason. Two approaches were used in the act to prevent this: (1) The prohibition against all traffic in interstate or foreign commerce in endangered animals or their products; (2) the authorization for the Secretary to prevent the destruction of critical habitats. It was, we believe, the clear intention of the act that no endangered animal would be removed from the wild for any purpose except for scientific purposes or to enhance the propagation or survival of the affected species.

I stress "from the wild", Mr. Chairman, because I think this is exactly what Congress had in mind. We believe they did not envision, nor was it ever discussed, that animals already in captivity or born in captivity, and persons keeping those animals, would be totally regulated in every activity relating to the shipment of those animals at any time in the future. But that is exactly what has happened.

The bill that the Congress finally passed, and the regulations that have been subsequently promulgated to effectuate the act, have resulted in a bureaucratic nightmare, the likes of which was never envisioned by most of the supporters of the act. We have been told many times by many Members, that Congress never intended, or even thought about, putting zoos out of business or substantially impairing their activities. But the current act has been seized upon by many extremists, both in and outside of the Government, as a means to advance that very goal. Gentlemen, we believe Congress was misled—either purposefully or accidentally—but Congress was misled.

You were told that you were passing an act that would stop the taking of endangered animals from the wild and, by cutting off a large market in the United States, we would stop the poaching of those animals in countries where the laws are not sufficient to totally regulate. Those goals are admirable and zoos applaud them and continue to support them. But the act that was passed was so overly broad and far reaching that it provides the bureaucrats in the Department of the Interior the opportunity to totally regulate any and every kind of animal in this country if they so desire.

The recent regulations promulgated about the American alligator [40 Fed. Reg. 44112, September 26, 1975] are a fine case in point. They demonstrate, we believe, vividly that once an animal has been placed on the endangered species list, it will never be removed, even if the population grows so large as to become a potential threat. The alligator has recovered from its previously depleted status to such a large population that it is necessary to remove some of the animals by hunting to prevent overpopulation and to keep them from becoming a menace.

Gentlemen, Congressman Breaux from Louisiana said yesterday the only species endangered in his parish were people and domestic wildlife.

Yet Interior, using the similarity of appearance and separate population authorities in the act, has determined that alligators in

three parishes of Louisiana are only threatened, and therefore they will continue to regulate them, although they will allow a hunt. The rest of the animals all across the Southern United States are still considered endangered. Now, this is a patently ridiculous finding on the part of Interior and one not borne out by the facts. Even Interior's regulations say that population levels in Georgia, South Carolina, Florida, Louisiana, and Texas are high. They promise that, at a later date, they will divide up the range of the American alligator so that each area, possibly each county, will have a different endangered status for the animals in it. This, gentlemen, opens up a whole new realm of redtape. Again, I do not think it was ever the intention of the U.S. Congress when they passed this act that Interior would introduce such mind-boggling distinctions. Either the American alligator is endangered or threatened, or it is not. Unnecessarily complicated distinctions do nothing to protect either the alligator or any other endangered species—they just provide greater expense to the taxpayer.

Yet, while Interior seems to be taking the act as far as it can go in this direction, they find themselves totally incapable of rendering a firm decision as to what the act means in some very basic points. For instance, the act imposes a prohibition against "commercial activity" in endangered species. Yet, 2 years later, Interior is unable to public relations definitively stating what constitutes commercial activity. I can assure you that a call to Interior will get you a different answer from every person.

But gentlemen, we cannot lay all the problems with the act to the Department of the Interior. There are very serious problems we believe with the act as written. One thing, we believe the act goes much too far beyond what is necessary to regulate endangered species. It is entirely logical, understandable, and desirable to regulate or prohibit interstate commerce in endangered species as a deterrent to taking them from the wild. But when those animals are born in captivity within the United States, it makes no sense at all to continue to regulate these animals. Most of the tigers in this country now held in zoos or by circuses were not captured from the wild, but were born in captivity. How is it going to help the tiger population in India or Siberia to prevent interstate commerce in tigers in the United States that were born here? As we see it, it makes no sense at all.

In addition, the act is unnecessarily discriminatory. For instance, in the area of "pre-Act" animals, only animals that were held in captivity in a nonprofit zoo on December 28, 1973, the date the act became effective, are not covered by the act. These same "pre-Act" animals that were held by a profitmaking zoo or a private breeder on that date are covered by the act. Now, I ask you, gentlemen, does this make any sense? Does this prevent any animal from being taken from the wild? Does this increase the wild population one iota? It is rank, and we believe, unconstitutional discrimination against the commercial zoological activities in this country.

Or, what about disposing of nonexempt surplus animals? In order to do this without going through the tedious and time consuming USDI permit process, one can only give them away, or lend them for breeding purposes. But one cannot sell them to another zoo.

Even if they are surplus, they cannot be sold unless the purchasing zoo has an approved breeding program, and even in such a case a permit is necessary. And, it is this latter provision that is most appalling: It makes the act counterproductive. Mr. Chairman, you will hear testimony today and be shown evidence that zoos have been in many cases required to separate or sterilize breeding pairs of endangered species because they fear that if those animals reproduce, they would be unable to get rid of the progeny because no recipient will be able to qualify for a permit. We submit their fears are entirely justified when we consider the amount of time it takes to get a permit from Interior Department even if one is qualified.

Not only that, many zoos simply do not apply for a permit because much of Interior's policy on permits is contained in unpublished papers, unavailable or unknown to many zoos when they ask Interior informally beforehand whether a permit will be required, they get vague or inconsistent answers. Moreover, what little is known about Interior's policies indicates that they are ambiguous and contradictory in many respects. Rather than go through the red-tape, it is far simpler—especially for the smaller zoo—to simply separate the pair and stop breeding them.

Gentlemen, you have heard much that is wrong with the act. What are our proposals for change?

First: We propose no change in the requirement that there must be a license to take endangered species from the wild and that such license shall only be granted in the interest of scientific research or for propagation of the species. However, insofar as zoological animals are concerned, we find the distinction between commercial and noncommercial zoos to be totally irrelevant to the purposes of this act. The distinction should be eliminated and qualified zoological institutions should be able to freely exchange all their animals among themselves.

Second: We find it consistent with the purposes of the act, and we urge, that you exempt totally from the provisions of this act any animal of an endangered species that was born in captivity within the United States so long as that animal is maintained within the zoological community. Most of the tigers, many of the leopards, jaguars, and other large cats, as well as numerous exotic birds and other wildlife are bred in this country with considerable regularity. It makes no sense to subject either the animals, or the zoos, to the bureaucratic bungling and indecision of the Interior Department when this will have no positive effect on the species in the wild. Such an exemption for captive born animals would make less of a permit problem, and Interior might be able to devote itself to the task of enforcing the law and the permit requirements where it is needed—when people want to take animals from the wild. As we said, we see no way that such an exemption will be detrimental to the wild population. In fact, as you will hear later on, the ability to freely move captive-born animals in interstate commerce in the United States would be an incentive for zoological institutions to breed those animals for sale to other zoos, and would, therefore, actually increase the captive population in this country. There should remain in the act a rebuttable presumption that an animal on the endangered species list is not captive born, with that presumption being rebuttable by appropriate evidence.

Gentlemen, Interior is wandering around in a thicket of redtape trying to enforce the act and yet is still trying to get further authority for themselves and to introduce additional complications into an already complicated piece of legislation. We suggest, in the interests of administrative efficiency, and in the name of helping to preserve the animals in the wild, that all animals born in captivity in the United States be taken out from under the provisions of the Endangered Species Act. There are those who feel the act, once passed, is sacred, and who will object to this, saying that we recommend weakening the act. But, gentlemen, you may see that it is in no way weakening the act, as it was intended to be applied. It only simplifies enforcement and this simplification may, in fact, make Interior more able to enforce the remaining important provisions. Thank you.

Thank you very much.

Mr. LEGGETT. Thank you very much, Mr. Steele. I agree a lot with what you said.

Certainly under an endangered species camouflage, we do not intend to generally regulate all zoological activity.

On the other hand, it does give us a handle on improper maintenance of certain kinds of species, and once you get that handle, you can recognize the fact that you do not like to give that up.

I think you are right, the main thrust of the bill was to govern taking animals from the wild, and the act was later enacted to restrict interstate commerce in those animals.

I would think that the redtape in the Department of Interior ought to be cleared up, that if animals are domestically raised, or if they were in the country, or licensed to come into the country under the act, they should be allowed to be freely traded among qualified facilities, whether they be for profit or nonprofit, and I think the distinction between nonprofit and profit makes no sense in this case, because I have seen rather diabolic facilities in both the public and private sector, so we may address ourself to that matter by legislation rather than by regulation.

Mr. Lentz?

Mr. LENTZ. Thank you.

I want to tell you some of the problems Busch Gardens has encountered.

On July 24 of this year, we had an unfortunate occurrence in that we lost one of our low-land gorillas.

Knowing that gorillas or other apes do occasionally grieve when they lose a mate, we made every attempt to find a new location for her, with other gorillas, or an attempt to bring an animal to her.

This we did. We found those in Cincinnati, Ohio, in that zoo, they in fact could take her on a loan basis to put her with a group of gorillas.

During the discussion with Mr. Maruska of the Cincinnati Zoo, I discussed the fact that perhaps there was something in the law that might cover the movement of this animal from Busch Gardens to Cincinnati, as regards commercial operations.

With that thought in mind, I talked to Mr. Earl Baysinger in the Office of Endangered Species to clarify whether or not there was or was not anything that affected her movement.

Mr. Baysinger referred me to the Law Enforcement Division, and then for about the next 2 weeks, I talked with quite a few people in the Office of Endangered Species, and, finally, after about 25 days I received a letter from Mr. Schreiner of the Department of Interior, that did in fact give us an interpretation of the Endangered Species Act, which basically says that Busch Gardens, being commercial, can send its female low-land gorilla to the Cincinnati Zoo on loan, or as a gift without any kind of permit.

Mr. Schreiner, the Deputy Director of the Fish and Wildlife Service has sent a letter to that effect.

Busch Gardens, he said, will have to apply and obtain a permit in the future to receive any offspring from Cincinnati if any offspring are born to our female. Since Busch Gardens is commercial, the permit will be required. It is our interpretation that a nonprofit zoo would not be required to obtain a permit to move offspring of a gorilla on the same basis.

The second point above illustrates one problem with the Endangered Species Law—the distinction between commercial and nonprofit zoos. I ask you to review attachment 2 which was my letter to Zoological Action Committee, Inc. (ZOOACT) explaining my immediate problems regarding this move. This attachment illustrates three major points:

The distinction between commercial and noncommercial zoos in my mind is discriminatory. Not only are “commercial” zoos hampered from attempting sensible animal management but the unfortunate endangered species are the ones that are losing. The intent of the law, to prevent or retard the extinction of endangered species, is excellent and was needed, but the law is working against endangered species. A gorilla or other endangered species is the same whether it lives in a commercial or a noncommercial zoo. It should be afforded equal and efficient regulations regarding its future on earth.

It is a fact that virtually every noncommercial zoo in the United States sells one form of service or other, whether it be admission to the zoo, souvenirs, food, et cetera. These goods are sold to provide funds to offset operating costs with a desired goal of sufficient earnings to break even or earn a profit. A major midwestern public nonprofit zoo currently acquires 50 percent of its total income from sales of services and goods. The other 50 percent is from public taxation. Why should a commercial zoo be penalized when none of its operating expenses come from the American public through mandate (taxation)? Why should a commercial zoo be penalized when it pays state and federal taxes and nonprofit zoos do not? Do you think it is proper that current Federal animal laws apply more restrictions to Anheuser-Busch, Inc., animal facilities than the same laws apply to nonprofit zoos when Anheuser-Busch Inc., paid over \$378 million in Federal taxes in 1974? Nonprofit zoos don't pay any taxes to anyone. If nonprofit zoos do not make a profit, why penalize efficiently operated zoos that do earn a profit?

The more money all zoos can earn, the more money will normally be allocated to them for improvements and proper care of the animals that we are all so concerned about.

Suffice to say that this country is supported by money, why shouldn't animals be supported by it?



During a conversation with a top official of the U.S. Fish and Wildlife Service in August, I was told that the intent of the endangered species law was to protect and prevent the extermination of given species in the wild. The official also frankly told me that it is obvious that zoos cannot propagate and maintain exotic endangered species and eventually reintroduce them to the wild. In effect, he indicated that zoo animal management for the preservation of endangered species was nonsense and that his real goal was to prevent extermination in the wild.

I would like to respond to this with a simple question—eventually, where will there be suitable wildlife habitat left on Earth to support and allow many endangered species to survive and propagate in the wild? In my opinion most of the larger species of wildlife will only exist in one form of captivity or another. It will be captivity in zoos, national parks, wildlife preserves, et cetera, all managed by man.

It should also be obvious that predatory animals and other animals that are a threat to man or his endeavors will be eliminated or reduced greatly. A few examples are evident in this country: Timber wolf, mountain lion, and American bison.

There is no possible way to allow timber wolves and mountain lions to coexist with man outside of protected preserves. As far as

I know the bison is living only on protected lands now and in most cases the bison is cropped yearly under USDI supervision. The bison has been preserved from extinction primarily because of the New York Zoological Park which sent surplus specimens from their captive zoo herd to the Federal wildlife refuge that was established in the Wichita Mountains in Oklahoma in the early 1900's.

Although a noble and worthwhile cause to protect and prevent the extermination of given species in the wild, that is nonsense and more shortsighted than the establishment of effective captive animal management plus protection in the wild.

The wildlife of the world has been victimized by primarily well-meaning groups of people collectively called animal protectionists. Most of them want animals treated properly and preserved in living form rather than in museums. Zoo personnel want the same thing. The difference between protectionists and zoo personnel, in my opinion, is diverse animal knowledge. Most protectionists are lay personnel with interest and concern for all animals but knowledge of only one or two species. Zoo personnel are professional people with a comparatively vast knowledge of many species of animals. Zoo personnel can see the forest for the trees.

In June of 1974, I attended a meeting in Washington that was a symposium on endangered species. Persons attending the meeting included students, members of various humane groups, researchers, government officials, including Mr. Nathaniel Reed, some zoo directors, and others.

Various papers were presented that dealt with the status of individual species in the wild. Some papers were informative while others were presented to emotionally arouse the audience because of their slanted presentations. Most of the papers ignored the necessity to preserve the entire ecosystem; rather, they attempted to save a single species with little regard for its interrelationships to its environment.

This meeting was emotional and contained a great number of do-gooders who have caused these restrictive laws to be enacted. These people are the antizoo people who do not want to see animals confined but they apparently want to prevent extinction of animals. They want to have their cake and eat it too. Preservation of wild animals needs all phases of protection including zoos, and at present zoos are not allowed to provide their expertise and abilities that are much greater than the expertise and abilities of protectionists and protectionist groups.

Zoos are already controlled by many State and Federal laws. Some of the laws require special licenses or permits to engage in specific activities while other laws allow blanket permits to cover other activities. At present, Busch Gardens operates under the following permits, licenses, et cetera.

(1) USDA—Approved to import and hold foreign ruminants in Busch Gardens in permanent postentry quarantine. Only 50 or so zoos in the United States are so approved. Annual inspections made by USDA of Busch Gardens.

(2) USDA—Licensed as an exhibitor under the Animal Welfare Act. Annual inspections made by USDA of Busch Gardens.

(3) USDI—Permit—waterfowl sale and disposal permit—to sell, trade, or give away captive-reared migratory waterfowl. Annual report required of activities to USDI.

(4) USDI—Permit to salvage crippled or injured migratory birds. Annual report required of activities to USDI.

(5) State of Florida—Permit to process wildlife for public exhibition or public sale. Annual report required of activities to the State.

(6) State of Florida—Game farm license allows us to operate a private game farm. Annual report required of activities to the State.

(7) State of Florida—Comply with minimum pen specifications. Annual inspection made by the State of Busch Gardens.

(8) State of Florida—Approved to take complaint alligators from the State as available.

(9) Other specific activity permits have been issued to Busch Gardens over the years from State and Federal agencies.

It is very apparent to me, because I must constantly monitor our permits/licenses, that Busch Gardens is well regulated and restricted. We have been judged competent to receive the above permits but because we are commercial we are now categorized as a special case when it involves endangered species.

We do not wish to have the endangered species law retracted but we do wish to be allowed freedom to buy, sell, trade, donate, et cetera, any animal in zoological collections. We are not opposed to restrictions but we believe the present Endangered Species Act is too restrictive for the proper management of endangered species in captivity. As I have stated before, it is naive to believe that endangered species can be preserved from extinction totally by attempted protection in the wild. Captive management is essential in addition to protection in the wild and workable laws are essential to proper captive management.

It is my hope that you gentlemen will hear the plight of the zoo, and the plight of the endangered species, above the outcry of the

protectionists and look at the matter in the light of reality. If the Government and the protectionists truly want to preserve endangered wildlife, it is obligatory that they realize that zoos can be their ally, not their opponent.

Mr. Chairman, thank you for your time.

Mr. LEGGETT. Thank you very much, Mr. Lentz.

Let's see, we have in the audience, Mr. Baysinger, the Chief of the Office of Endangered Species.

Mr. Baysinger, if you could come to the table, it would help us.

I would like to ask, Mr. Steele, since your testimony is prepared, and we have published new rules and regulations for endangered species, and I am aware in some respects the distinction between commercial and noncommercial is maintained in those regulations.

Would you care to comment on your regulations as far as you are able to, on how it would help solve some of the problems?

Mr. STEELE. Yes, I welcome the opportunity.

I might say we only have these regulations as of Friday. I think it is a strange coincidence that it took Interior 21 months to issue them. It is also suspiciously coincidental that we just get them at this point—on the eve of this hearing.

We congratulate them on finally getting these regulations out.

As we look at these regulations, there are several things that causes some concern.

In the first sentence, it would appear to us that they are trying to make some rather substantial changes in the language of the act, not by amending the act, but by administrative procedures.

Now, while we applaud the direction in which it is going, given the reality of the judicial review and litigation by some of our more extreme protectionist organizations, we feel this is a very precarious route to take.

Second, after looking at these regulations, if we can make three assumptions, No. 1, if we assume that Interior has really recognized the unique position of zoos, and the needs thereof, and No. 2, if we can assume that Interior, by some Bicentennial magic act, can increase the efficiency of their administrative processes, then it is quite possible that, maybe eventually, the new regulations could give us some help.

Let me turn to one question now; these regulations provide conceptually for the establishment of captive sustaining population, but if you would read them very closely, they have eight items, eight conditions, in which I presume they are going to base the criteria of what constitutes a captive self-sustaining population.

Based on our 2 years of experience with Interior, this gives us great concern, for example, factor No. 8 includes such other factors as he deems appropriate.

That can cover a whole multitude of sins. Eventually, Interior can come out with the criteria which captive self-sustaining populations are based; then we go through hearings, and then if some protectionist's attorney decides that Interior is trying to do by regulation what is prohibited by act, they take Interior to court, and this, based on our experience, Mr. Chairman, with other similar acts, it is quite conceivable, we could see it could take a year before we could actually get effective action for captive self-sustained

populations. Assuming we could do this earlier than that, again, if we read the regulation correctly every institution involved with captive sustained populations would have to be licensed, would have to secure a permit, and once again that permit is subject to judicial review, public hearings, and so forth.

While again we applaud the direction, the minute step that has been taken toward the reality, we still think that this new set of approaches and regulations constitutes just another cloak for bureaucracy to go on and take the time and money of zoos, and to further inhibit the captive breeding of endangered species.

Mr. LEGGETT. Mr. Baysinger, would you comment on the regulation.

Mr. BAYSINGER. I am Earl Baysinger, Assistant Chief of the Office of Endangered Species and International Activities, U.S. Fish and Wildlife Service.

Mr. Steele made a number of good points, and he has a keen eye for coincidence.

I will not comment on that any further. The regulations did come out Friday, and the regulations cover the area of concern for persons with whom Mr. Steele is associated, more comprehensively than the previous regulations but not as comprehensively as they would like.

We acted in two areas, one of which is the redefinition of what constitutes industry or trade vis-a-vis commercial purposes. As the people in the audience well know, the restrictions on the movement of endangered species from institution to institution across State lines is affected by this redefinition.

We redefined the term "industry or trade" in the definition of "commercial activity" as used in the act, to mean the actual or intended transfer of wildlife or plants from one person to another person in the pursuit of gain or profit.

That makes it much easier for organizations such as circuses or zoos to move such endangered species across State lines even for gain or profit provided no change of ownership is involved.

It also makes it much easier for organizations such as those Mr. Steele represents, to move animals back and forth between themselves for breeding purposes.

It still usually requires a permit to sell an animal across State lines.

These same regulations deal with captive self-sustaining populations, a concept which also addresses that problem to a degree.

If I could philosophize on the intent of the Act, a bit, we do not want to place any undue burdens on persons breeding endangered species in captivity.

I think I speak for the Department on that issues. However, we do feel there are many critically endangered animals held in captivity by persons or institutions other than zoos.

This would include the pet industry, research institutions, private pet owners, and others who are not breeding these animals.

We feel that this is a waste of the resource. Once those animals die, if replacements bred in captivity are not available, they must be brought in from the wild.

There is no other source for them. We are trying under the captive self-sustaining population concept to establish a means of encouraging members of the zoo profession and others who wish to enhance the status of wildlife, and who have the expertise, facilities and ability to breed these animals in captivity. We are establishing a procedure, and would agree with Mr. Steele that it looks bureaucratic and has the potential of becoming so, if we do not watch our p's and q's. It does not have to be, if or when a population of an endangered species has been established in this country which is capable of sustaining itself then the Federal Government should allow commerce in such amounts as possible. We have a procedure for making such determinations, and contrary to some of the inferences, I do not think it will be an overly restrictive procedure.

I have data on my desk, that indicates there are several species of pheasants that could be in this category. I suspect some of the big cats, you will hear comments about today, should be in this category.

We are working closely with Dr. Seal and other 300 personnel. I do not know whether the doctor will testify or not. He has data in his files that will assist us in determining when a self-sustaining population has been reached.

When such data is available, we can determine that the species is threatened other than endangered within the United States, and will have the option of writing those regulations necessary for the conservation of the species, making possible a much simplified procedure. An individual could submit an application with information similar to what we now require but hopefully more brief.

They then could receive a permit, which is essentially a license, valid perhaps, for 2 years. This would authorize them to sell these animals to other like-licensed persons.

This permit system would be backed up by a type of "report card" that you would, that would enable us to track the movement of the animals.

As we now envision it, it would consist of a three-ply form, with the 3rd copy existing of a self-addressed postal card—the seller locates a buyer, fills out the form, keeps one copy for his files, and forwards the other two to the buyer.

The buyer signs, thus acknowledging receipt, and keeps the second copy for his files. We receive the postal card copy. Periodically we would transfer this data to Dr. Seal's International Species Inventory System, where it would be entered into a computer. This makes it possible to monitor these captive self-sustaining populations, and to assume that factors are not at work which could cause the population to crash.

I think these two new provisions, coupled with the fact that no permit is required to sell animals intrastate, would provide most of the relief required. It would still enable us to maintain sufficient control over those endangered species that have not attained a captive self-sustaining population, and would encourage owners to cooperate in breeding them until they do attain that status, at which time we would get off their back. Thank you.

Mr. LEGGETT. Mr. De La Garza?

Mr. DE LA GARZA. I want to clear up, you said a lot of nice things on how it will work, but this is not in effect now.

Mr. BAYSINGER. The final regulations have been published. They are now the law.

The system for establishing the captive sustaining populations is in effect.

I have on my desk nominations for several species. How fast we move, I would suspect, depends upon other priorities in the office. I do not set these priorities. I would anticipate that it could come out as a proposed rulemaking in the next 2 or 3 weeks.

We are thinking now of about a half dozen exotic pheasants, and we will move on a number of big cats for which I understand data will follow soon.

Mr. DE LA GARZA. Let me ask you, I know of this gentleman who has a ranch in my district, and he has a lot of wild animals, some of which would be on the endangered species, and one of these species, he has got more than he can handle, and recently, I read in the paper, he said we are going to have to do away with them or let them starve, because there is not enough food on the range, because of these people up in Washington, I guess he meant you.

Mr. BAYSINGER. I would like to think not.

Mr. DE LA GARZA. Saying they will not let us move them and we cannot get them any place else, and all this beautiful theory about self-sustaining and so on, and that many acres, could not hold that many of this type of animal.

Now, what does he do?

Mr. BAYSINGER. We recognize the problem. I think this was during overview hearing considered in testimony before this committee about a year ago, if it is the Y.O. Ranch you are thinking of. I may be wrong, but I think we are speaking of the black buck, which is not an endangered species.

Mr. BAYSINGER. If it were an endangered species for which this condition existed, and if he wished to call them across the State line, as the regulations stand today, he probably would have to apply for a permit.

If the condition exists as he describes it, that species probably has reached the status of a captive self-sustaining population.

The next move would be to nominate that species for reclassification. Such action would require a 60-day Federal Register comment period, but could be consummated within 90 days if the procedures were operating smoothly.

Mr. DE LA GARZA. You speak too fast, and you say a lot of things, and then you say nothing, with all due respect.

Self-sustaining were, the 15 elk, in the 10 acres, or in the whole United States.

Mr. BAYSINGER. I am sorry.

Let me clarify what we are talking about as far as captive self-sustaining populations are concerned.

The Act as you know defines a "species" to include any sub-species or "lesser group of animals in common spatial arrangement that interbred when mature."

We look upon that definition to be flexible enough so that if, within the continental United States, a population of an exotic animal capable of sustaining itself we will have the authority to re-classify that population to the "threatened" status.

Mr. DE LA GARZA. So it does not help the fellow with the 15 elks in the 10 acres, even though he cannot have more elk in that ten acres. He has already a surplus there.

Mr. BAYSINGER. No, it would not help him.

Mr. DE LA GARZA. It does not.

Mr. BAYSINGER. That would not be a captive self-sustaining—

Mr. DE LA GARZA. He still has to eat these exotic animals then?

Mr. BAYSINGER. Or sell them.

Mr. DE LA GARZA. But you will not let him sell them.

Mr. BAYSINGER. Certainly. If he sells them within the state, the Act does not apply. If he sells across the state line, he can do so, but it probably would require a permit.

If he wanted to sell to a zoo or to another breeder, he probably could do so.

Mr. DE LA GARZA. He can sell any endangered species within the state on his own?

Mr. BAYSINGER. That is generally correct. The prohibition speaks to interstate commerce for commercial purposes.

Mr. DE LA GARZA. Is this same act applicable to a zoo?

Mr. BAYSINGER. Yes, sir.

Mr. DE LA GARZA. Here I am giving you the name, Gladys Porter Zoo in Brownsville, Tex., who has all of the beautiful endangered species.

They always seem to have trouble either bringing in the endangered species, or getting them to another zoo.

Are you going to work out this problem?

Mr. BAYSINGER. I would like to think the agencies involved will work out the problems.

I would not want to speak for other involved agencies, but we recognize this problem. There are a number of problems that institutions who are legitimately dealing with animals face. They have 5 Federal agencies they have to wrestle with and I sympathize with them. We have ideas which may solve some of these but it will take some time.

Mr. DE LA GARZA. Our concern is, all of us who have worked, and all of us who are conservationists, want to preserve the species, and we do everything we can, and certainly people like the Gladys Porters do, have done a beautiful job, and they have now some very rare endangered species, but somebody is always putting something in the way in order to better conserve the species, and some of us are concerned that in trying to protect them, we are not going to protect them, we will endanger them further.

It is very frustrating, when you say they have 4 or 5 Government agencies to deal with, heck, if I cannot deal with them here, how do you expect a poor person out in the countryside to deal with you.

My greatest frustration here is dealing with the bureaucracy, and I raise cane, hit the ceiling, jump up and down and sideways, and it is always somebody above him, or somebody below him that did or did not do the job, so I am using you, because you are the one that is here.

Mr. BAYSINGER. That is probably one of the best uses to which I have been put in some time. I agree with you. I sympathize with them. I can assure you that those above as in my hierarchy are aware of this problem.

I think implementation of the convention on international trade in endangered species of wild fauna and flora, and particularly the establishment of the Management and Scientific authorities required by the convention, provide a potential means of bringing the various agencies together in a cooperative arrangement that could relieve most of the problems these gentlemen face.

Mr. DE LA GARZA. We are very proud of what people have done in my area, the King Ranch is now sending some animals to India where they came from, and they have more in the King Ranch than they do in India, but all these obstacles are placed in their way, and I would like to leave this with you, and you can carry it on, please do not put obstacles in our way, where we are trying to do things that are extraordinary and above and beyond what common-sense dictates, and yesterday I had a hearing in Agriculture, and Assistant Secretary of Agriculture; he said we cannot use common-sense. We have to go by the law.

Gentlemen, the law always reads beautiful, and then come the regulators and mess it up; so hopefully, this will make some legislative history, Mr. Chairman, that this witness said that my people that are trying to conserve these endangered species, are not going to have any problems with their great and very commendable work.

Mr. BAYSINGER. I would correct that just a bit. I would say we are trying to remove all problems that should be removed. There will still be restrictions on these species in this country that have not obtained the captive self-sustaining population status insofar as certain types of movement are concerned. Those will still require a permit.

Mr. DE LA GARZA. But not within a State.

Mr. BAYSINGER. Within the State, as I understand the statute—

Mr. DE LA GARZA. He can do anything he wants within that State.

Mr. BAYSINGER. Not necessarily if you mean things like taking and killing. However, intrastate sales are not restricted by the act.

Mr. DE LA GARZA. The conservationists do not go out and kill. These people are spending thousands and thousands of dollars on exotic animals, and they get to be like part of the family.

They are not going to go and dump them in somebody's backyard. That is what the bureaucracy does not understand. I think, that these people, when Mr. Kleberg was alive, God rest his soul, he knew every animal in that ranch; he could say that is the little one, that is the big one, and that is the way they treat the animals. But you just look at numbers up here, and you are not dealing with people. Why would somebody spend thousands of dollars, and devote his ranch to using the exotic animals, and then do such a thing?

I am not speaking of the ranches, where you go pay, but I am speaking for the pure conservationists, and one further thing, right across the river, the Longoria family, I do not know if you are acquainted with them; they have this beautiful preserve, and they are doing beautifully, but the bureaucracy does not bother them for they are in another country; but let them try and give us an animal for our zoo and all hell breaks loose. This is not right and does not really conserve our endangered species.

I think I have run out of time.



Mr. LEGGETT. Let the record show my distinguished colleague from Texas is not a jumping bean.

Mr. DE LA GARZA. I believe it was counsel that reminded me my time was up.

Mr. LEGGETT. Very good.

Well, I think that Mr. De La Garza has expressed very well the frustrations that people in the industry feel, and a number of Congressmen do also, and I want to assure all of you folks that we do intend to convert this legislation into commonsense, and if it is not commonsense now, we want a recommendation from industry, the departments, on how to make it commonsense.

If you cannot live with the way the legislation is drafted, we will redraft it.

If you do not have enough personnel to administer the act, come to Congress and tell us.

We do not want applications filed and sitting unopened on a desk for two weeks.

HUD, that is their policy, in San Francisco, and other departments; applications are not even opened for a period of several weeks, because of the manpower restrictions, and I know how it is. I get probably 500 letters on my desk every morning, but we have to clear off our desks every single day, and we try to. We have to operate under the same theory of the executive branch, and all of the purposes we are trying to accomplish do not occur. That is especially true when you are dealing with complex legislation. So we are going to not forget about this matter for a year, but we are going to have another symposium, maybe not a formal hearing, in 3 months, and we will see how the regulations are working, and we will have the industry come back, and we will see how it is moving along.

If we have problems at that time, we can review it. We have a lot of testimony to hear. Thank you very much.

Mr. Baysinger, if you remain available today, we would appreciate it.

Mr. BAYSINGER. Thank you.

[Documents attached to the prepared statement follow:]

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C., August 25, 1975.

Mr. GERALD LENTZ,  
Director of the Zoo,  
Busch Gardens,  
Tampa, Fla.

DEAR MR. LENTZ: This is to confirm our telephone conversation concerning the loan of a female gorilla, classified as an Endangered Species, from Busch Gardens to the Cincinnati Zoo.

From the facts you gave me, during our telephone conversation, I conclude that no Endangered Species permit is required for Busch Gardens to transfer the gorilla on a breeding loan arrangement to the Cincinnati Zoo. Further, no Endangered Species permit would be required to effect the transfer of the female gorilla from the Cincinnati Zoo back to Busch Gardens if that were desired. This judgment is conditioned on the fact that both transfers involve no exchange of money. This is also affirmed on the second page of the fact sheet entitled *Endangered Species Act of 1973, Prohibitions and Permits (FS-3, Oct. 74)* which was forwarded to you on August 6, 1975.

However, if progeny of the female gorilla are to be returned to Busch Gardens, an Endangered Species permit would be required *prior* to the return

of any animals. This is occasioned by the fact that since Busch Gardens is not a non-profit institution, receiving offspring from the Cincinnati Zoo would be "in the course of a commercial activity" as we interpret the statute.

Should you have further questions concerning application for an Endangered Species permit, please let me know.

Sincerely yours,

KEITH M. SCHREINER,  
Associate Director Federal Assistance.

BUSCH GARDENS,  
ANHEUSER-BUSCH, INC.,  
St. Louis, Mo., August 15, 1975.

Mr. GEORGE E. STEELE, Jr.,  
Executive Director, ZOOACT,  
1225 Nineteenth Street, NW.,  
Washington, D.C.

DEAR GEORGE: As a follow-up to our telephone conversation of August 11, I provide this letter as a brief summary of events involving a possible breeding loan between Busch Gardens and the Cincinnati Zoo. Busch Gardens wishes to send a 13-year-old female lowland gorilla to the Cincinnati Zoo on a breeding loan basis. This gorilla has been in Busch Gardens since 1964 and has been our property for these past 11 years.

July 24, 1975.—Our 13-year-old male lowland gorilla died when he aspirated regurgitated fluids during recovery from immobilization. His death left our only other gorilla, the above mentioned female, alone and without companionship.

Knowing that large primates often grieve after the death of a close companion, I began (that evening) calling other zoos in the country trying to locate a male to borrow or a place to loan our female so she could have companionship again very quickly.

July 29, 1975.—Mr. Ed Maruska, Director of the Cincinnati Zoo in Ohio, called me back and said that his zoo could take the female immediately on a breeding loan.

August 1, 1975.—I obtained approval from my superior in our St. Louis office for the above move.

August 5, 1975.—Since the lowland gorilla is an endangered species, I called Mr. Earl Raysinger in the Endangered Species Office in Washington to be certain that no regulations covered this proposed loan. Mr. Baysinger asked Mr. Jim Sheridan of that office to call me, which he did on the same day.

Mr. Sheridan was very pleasant and helpful but, unfortunately, he could only explain to me the meaning of the law in this instance, which prohibits a commercial zoo from moving this animal anywhere on a breeding loan without a permit.

We know that permit requests take an unrealistic period of time for approval/disapproval so moving this gorilla to other gorilla companionship immediately is out of the question. We are now faced with the possibility of this animal grieving, becoming morose, and dying. This is an example of effective, humane legislation designed to preserve endangered species?

Mr. Sheridan further explained that Busch Gardens could give or permanently loan this gorilla to Cincinnati without a permit. But we could not send her on breeding loan which would return a portion of any offspring to Busch Gardens because that would constitute a "commercial" transaction.

However, a non-commercial (non-profit) zoo could send a breeding male gorilla to Busch Gardens on a breeding loan basis without a permit.

How can we sensibly profess to hold our heads high as leaders in the fight to preserve endangered species with obvious inequities such as this? A gorilla is a gorilla, it's endangered whether it is in nature or owned by a non-profit zoo or a profit-making zoo. The gorilla is what we are supposedly protecting, but it can be clearly seen in this case that the gorilla is secondary to the unknown goals of others.

If the intent of the Endangered Species Act was to truly protect animals from extinction, how can the Department of Interior continue, in good conscience, to enforce the "commercial" terminology as rigidly as they do?

Busch Gardens is a division of Anheuser-Busch, Inc., the world's largest brewery. That should indicate to anyone that we are commercial, but it is also public knowledge that Anheuser-Busch is a profitable, efficiently managed

corporation that has money to put into all of its divisions including Busch Gardens. This money allows Busch Gardens to provide the best possible care for its animals. Busch Gardens has an excellent animal propagation record and is on the threshold of becoming atruly outstanding exotic animal facility after only 15 years of existence.

Compare Busch Gardens and other excellent "commercial" zoos—Sea World and Catskill Game Farm are two examples—to the unrestricted non-profit/municipal zoos. Most of the non-profits do an excellent job but most lack finances to provide as well totally as "commercial" zoos. Also most non-profit zoos charge admission; sell ice cream, cokes, sandwiches, souvenirs; charge for train rides and elephant rides, etc. Non-profits also sell and trade animals for income. In other words, non-profit zoos sell the same things that Busch Gardens sells and the only reason they are non-profit is because they are governed municipally or by non-profit societies or they are inefficiently managed, causing them to lose money.

The Endangered Species Act discriminates between non-profit and profit-oriented institutions and provides different sets of rules for each to follow. Each has the same goals—efficient exotic animal management—but profit-oriented zoos are being prevented from proper animal management because of the "commercial" rules. It should be evident to anyone truly interested in preserving animal life that all good institutions, non-profit or profit making, should be assisted wherever possible in their pursuits, not deterred. It should also be apparent to any persons or agencies with knowledge of the world's fauna, that in the near future, major wild animal populations will only exist in one form of captivity or another. After all, African game parks are restricted, managed, captive animal areas.

Therefore, animal protective agencies and protectionists should assist wild animals by supporting proper captive animal institutions, by converting existing protective laws into efficient mechanisms for the future livelihood of the world's wildlife.

Sincerely,

GERALD S. LENTZ,  
*Manager, Zoological Operations.*

Mr. LEGGETT. Our next witness is Richard K. Yancey, assistant to the director, Louisiana Wildlife and Fisheries Commission.

Mr. Yancey, we have your statement, and you may proceed.

#### **STATEMENT OF RICHARD K. YANCEY, ASSISTANT TO THE DIRECTOR, LOUISIANA WILDLIFE AND FISHERIES COMMISSION**

Mr. YANCEY. Mr. Chairman and members of the Committee, I am Richard K. Yancey, Assistant Director, Louisiana Wildlife and Fisheries Commission, and on my right, I have the Chief of the Refuge for the Wildlife and Fisheries Commission.

We have had some very agonizing experiences in Louisiana in the last 4 or 5 years, in connection with the endangered species law, and we welcome the opportunity to share some of these problems with you here today.

We felt this would be the appropriate time to bring some of the problems that we have, that we have had to your attention, and perhaps you can assist us in some respect with these problems.

Some of our concern, in connection with the entire endangered species movement, perhaps we are seeing a gradual transition of Federal authority in the management of certain species, and of the wildlife, in the areas of traditional jurisdictions.

We would like to begin by pointing out that historically wildlife in the United States has been subjected to broad utilization for recreational and commercial purposes. During the 19th century over-exploitation of certain species occurred and some were drastically reduced in numbers. During the early part of the 20th century wild-

life management as a science began to take root and as a result tremendous strides were made in restoring populations of many game species. Also benefiting from these programs were numerous forms of non-game animals and birds. These achievements we think were particularly significant when taking into consideration deteriorating wildlife habitat conditions. Needless to say utilization or the prospect of same served as the principle stimulant in the restoration effort. Working cooperatively in this effort were State and Federal agencies, private conservation organizations and millions of sportsmen across the country. During the period jurisdiction over the management of resident or native species rested with the States while migratory birds were controlled by the Federal government.

I think we should also point out we think many of these restoration efforts have been successful to a great extent because the process of utilization of some of these forms of wildlife served as a standard in the restoration efforts, and working cooperatively in the efforts have been the State, Federal agencies, and many of the sportsmen across the country, and here again, during this period of restoration, the management wrestled with the States, and now with the Federal Government, and now are controlling of the migratory birds wrestled birds were controlled by the Federal government.

During the present decade, however, a new approach for managing wildlife has taken place. Authority for managing certain resident species has shifted from the States to the Federal Government. Pre-emption of State authority has taken place. The enactment of the Marine Mammals Act, Public Law 93-205 and the implementation of the International Trade Convention on Endangered Species convinces us that we are rapidly shifting into a new transition period of preservation and protection rather than wildlife management involving rational utilization and Federal rather than State control over the management of resident forms of wildlife. Certainly everyone agrees that truly endangered forms of wildlife should be given every possible measure of protection, and we have made some extensive effort in this regard in Louisiana for the passed three or four decades, I will not elaborate on those in this statement, however, I might mention them at the conclusion of this statement, however, we do feel that this should be used as a vehicle for moving Federal authority into an area of traditional State jurisdiction. We think the State is better suited to manage resident wildlife. We have a rapid decisionmaking process, immediate knowledge of local conditions, 88 full time biologists, 250 full time game law enforcement officers and 50 wildlife management area supervisors. We manage over a million acres of land. On the other hand the Federal Service in Louisiana has six law enforcement officers, only six or seven biologists and a half dozen refuge managers. In our opinion, the Service simply does not have the machinery in terms of manpower, funds, and decisionmaking process for managing a full-fledged program on behalf of resident wildlife. Nevertheless this is the direction in which we are moving.

In Louisiana a classic example of the results of such action has taken place as related to the American alligator, a so-called endangered species.

Already this morning, we heard mentioned the American alligator, and we think this served as a classic action of actions that have taken place, in connection with the American alligator.

The State's long-range alligator management programs, started in 1959, was totally disrupted by Public Law 93-205 and the International Trade Convention. During the decade of the 1950's gator populations reached an all time low as a result of over exploitation and habitat destruction. Before the term endangered species was ever heard of the State initiated a vigorous legislative, research, enforcement, and management program on behalf of this animal. The objective was to rebuild the population to optimum levels for ecological reasons. Also to plan for a sustained yield harvest that would result in economic benefits to marshland owners and trappers who in turn would then be encouraged by monetary incentive to protect the animals and maintain marshlands as favorable habitat for alligators and other fish and wildlife.

We feel if the marshland owners can get the sufficient amount of revenue from further trapping, hunting, and this sort of thing, then certainly they have an economic incentive to maintain these habitats, rather than drain them and put them into some other type of land use, and we all know that habitat is a basic in wildlife production.

We can be filled with the best intentions of the world, but if we do not have suitable habitats, all of our efforts are to no avail.

In southwest Louisiana the program was extremely successful and by 1970 gator populations had been restored over about 1 million plus acres of marsh. Hunting seasons had been closed for several years but it was now time to permit a regulated harvest to achieve the objectives mentioned above, as we mentioned a minute ago.

The people in southwest Louisiana who had worked long and hard on behalf of this effort were ready to derive some of the benefits. By that time, however, the animal had been listed as endangered under the 1969 act, but the State was not prohibited under the first endangered species act from permitting a harvest. Because it had been designated as endangered, however it was realized that the establishment of a hunting season would result in extensive protests from preservationist-oriented groups from around the country even though their contributions to the restoration effort had been nil in Louisiana. By 1972, however, the Louisiana Wildlife and Fisheries Commission was faced with the dilemma of either breaking faith with the people of southwest Louisiana and abandoning the basic principals and guidelines of wildlife management by keeping the season closed or proceed with opening the season and face the national outburst that was certain to follow. The commission decided to open a short carefully regulated season under a completely open door policy that would permit opponents as well as proponents to go to the area and see how the season was conducted. With the announcement of the season opening brought on a howl of out of State protest from New York to Los Angeles. At the same time criticism was expressed by the U.S. Fish and Wildlife Service which added fuel to the fire. Some preservationist organizations across the country pulled out all stops to halt the season. When these efforts failed many representatives from the news media and protectionists organizations came from far and wide to southwest Louisiana to

document this supposedly catastrophic event. However, after the visitors mingled with the local people and went into the marshes with the trappers, they came away with a completely different conclusion than expected.

It was surprising to us, the fact, we thought they had their mind made up when they got to southwest Louisiana, during open season, but after they went away, they had a completely different opinion, and as a result, there were only two or three critical reports.

Only two or three critical reports about the season were offered and by 1973, when another season was held, all opposition had melted away.

During the interim, however, alligator populations continued to increase and were consuming large numbers of fur-bearing animals, wading birds and had even become cannibalistic. The need for continuing the regulated harvest had become greater.

During December 1973 Public Law 93-205 became law and the International Trade Convention was recognized as being in effect. State authority in the management of the gator had shifted to Federal and even foreign control. As a result no season was held in 1974 even though there were 300,000 alligators in Louisiana. The State's successful management program had been thoroughly derailed. Management authority had shifted from Louisiana to Washington and beyond. We even had to obtain a permit from the Service to handle the 1,000 complaints that we were receiving per year. Telephone calls were pouring in from metropolitan areas like New Orleans, Baton Rouge, and Lake Charles to remove alligators from swimming pools, schoolyards, supermarket parking lots where they posed a threat of bodily harm. We attempted to divert a number of these calls to Federal agents in Louisiana but they refused to help. For 2 years Louisiana had been providing the Arkansas and Mississippi Game and Fish Commissions with alligators for restocking purposes. Suddenly in 1974 Federal permits had to be obtained before this program could be continued.

In the fact of this the State requested delisting the animal as prescribed in Public Law 93-205. On September 25, 1975, delisting was accomplished for three parishes and that same day our commission opened the hunting season using the same procedures followed in the 1973 season.

The gators were feeding on the young. Due to the fact that one alligator looks like another this resident species is still very much under Federal control because of the similarity of appearance proviso in Public Law 93-205. Additionally since the gator is on appendix I of the International Trade Convention the skins taken during the current season cannot be shipped out of the United States to Europe or Japan where the finest tanneries are located and the best prices obtained. Consequently, we expect the trappers to get substantially less for the skins this year than they received in 1973. Also the buyers have to obtain Federal licenses to buy the skins. This will further reduce the number of prospective buyers and lessen competition.

We have alligator farmers in Louisiana and one has 8,000 to 10,000 animals on hand. These people are being severely hurt by the present regulations. Those who have worked long and hard on behalf of the alligator don't understand why the present redtape

is necessary. To describe the situation as one of complete exasperation would be an understatement.

We had to then get a permit to handle them ourself, which we did, because we are the wildlife agency that is on the firing line when it comes to dealing with people.

Additionally, we had moved several hundred alligators from Louisiana to Arkansas, and given them to the game commissions in those States for a restocking, and we had to go through the red-tape to get the Federal permits to move these animals from one game and fish department to move them to another game and fish department, which in turn was going to attempt to rebuild populations of those animals in their States.

Mr. LEGGETT. I guess under the new regulations, you will have full authority to handle this the way you want.

Mr. YANCEY. In reviewing the regulations we received last week, we cannot.

Mr. LEGGETT. You cannot without a permit, take as a State agency, and move those animals anywhere you want?

Mr. YANCEY. We can move them within the State, but we stocked everything in Louisiana, and we moved several thousands of these animals within the State, and Mississippi and Arkansas wanted them to restore population of gators in some of their areas, and we have given them several hundred for this purpose, but now we have to get a Federal permit to do that, and the regulations that were published back in July, it was proposed this could be handled without a permit, but in the regulations just issued, apparently this is not the case.

Mr. LEGGETT. Mr. Baysinger, do you want to comment on that, please?

The State of Louisiana is up to their neck in alligators.

Mr. BAYSINGER. Yes, sir; Mr. Chairman, there has been some relief provided in the new regulations.

I am not intimately familiar with these regulations. They were changed some since the last draft I saw, however, as far as alligators are concerned, there is provision made in paragraph 17.42(b) which states that any employee or agent of the Service, any other Federal land management agency, or a State conservation agency, who is designated by his agency for such purposes, may, when acting in the course of his official duties, take American alligators without a permit if such action is necessary to: (1) a sick, injured, or orphaned specimen; or (2) dispose of a dead specimen; or (3) salvage a dead specimen which may be useful for scientific study; or (4) remove specimens which constitute a demonstrable but nonimmediate threat to human safety. The taking must be done in a humane manner, and may involve killing or injuring only if it has not been reasonably possible to eliminate such threat by the live capture and release of the specimen unharmed, in a remote area.

Mr. LEGGETT. You can take them and kill them?

Mr. BAYSINGER. Yes, sir; under certain conditions.

Mr. YANCEY. But in moving them, do we have to have a permit, under the present regulation?

Mr. BAYSINGER. As the regulations stand now, if you move them out of State in the course of a commercial activity you probably do.

Mr. LEGGETT. Is that a problem to move an alligator from one State to another?

Mr. YANCEY. It was not, but it is now.

Mr. LEGGETT. To get a permit, would that be a problem?

Mr. BAYSINGER. No, sir.

Mr. LEGGETT. How long would that take?

Mr. BAYSINGER. Let me make one or two comments. The alligators in the three parishes are no longer either endangered list.

Those animals have been removed. However, under section 4(e) of the act, the similarity of appearance clause, we are treating them as though they were threatened. This is because of the difficulty in distinguishing between products of those alligators and alligators taken from endangered populations.

This authority enables us to control interstate commerce. As far as the alligators in those three parishes are concerned, you can do with them as you would with a cottontail rabbit, provided you comply with the State and Federal controls.

Alligators from other areas do require permits except as noted in the regulations.

Mr. LEGGETT. How long would it take to get a permit?

Mr. YANCEY. Generally, the 30-day requirement, in the Federal Register, the turnaround time is running at 90 to 100 days in that time frame.

Mr. LEGGETT. This is ridiculous.

Mr. BAYSINGER. I would not want to argue with the Chairman; no, sir.

Mr. LEGGETT. It is ridiculous to take that much time for a permit to transfer those. I hope we are going to have the enforcement people here who can respond to that.

Mr. BAYSINGER. I think they will probably be back Monday.

Mr. LEGGETT. We have to respond to a rollover vote, and we will be back in just a minute.

[Whereupon, the subcommittee was in short recess.]

[Recess.]

Mr. LEGGETT. The subcommittee will please come to order. Mr. Yancey, we almost completed your testimony. We were asking some questions, and I hope you have been able to talk to our folks of the Department of Interior in the meantime.

Do you have any more problems?

Mr. YANCEY. We would like to share with you some of our closing comments.

Mr. LEGGETT. The time period on the permit, let me ask this, why do we have to publish every time we have a permit?

That seems to be unnecessarily complicated.

Mr. BAYSINGER. That is written into the act under section 10.

Mr. LEGGETT. Why don't we take that out?

Mr. BAYSINGER. It would be a possibility. However, I think testimony during enactment of the act indicated that such publication was desirable to make visible such applications so the public could participate in our decisions. There were questions about the permit-issuing procedures.

Mr. LEGGETT. I think something needs to be visible. I do not think that needs to be.



Mr. BAYSINGER. I will defer on that to those above me.

Mr. LEGGETT. All right. Go ahead.

Mr. YANCEY. In going forward here, on that same day our Commission opened the hunting season, it allowed some of these animals to be taken, using the same procedure we used in the 1972 season, the 1973 season.

However, due to the fact that the alligator in this particular area looked like another of the same species, it is still under Federal control, and in addition, since the gator is on appendix I of the International Trade Convention, the skins taken during the current season, we cannot have those shipped from the United States to Europe, where the finest tanneries are located, and we are fearful the people taking these animals will not get the prices they received in 1972 and in 1973.

Additionally, competition will be reduced for these skins, as far as this year, we will now have to have Federal licenses in order to buy these skins that will be sold on October 25 and 26.

During the 1972-73 season we had a whole load of buyers on hand. Competition was good, they got an average of about \$100 a piece for each skin. It was substantial revenue to the trappers.

Today, there is only one person that has acquired a Federal license to buy those skins, consequently, we think competition will be markedly reduced, when the sale is held on October 25, and since skins cannot move into international commerce, this will further reduce the price the people will get for the skins, and this is a commercial animal, and we had hoped it would produce revenue for the marshland owners and the trappers so that they would have an incentive to protect the animals, and this is the reason we started helping some 15 years ago, these people helped us, and some of these people have as much as 8,000 to 10,000 of these animals on hand, and they have been hurt by the present regulations. Overall, just from the standpoint of people there, they do not understand the situation, they do not understand why this animal has to be federally controlled, and to describe the situation from the public standpoint there, the point of exasperation in my opinion would be an understatement because we have been on the receiving end of all of this frustration and exasperation that has taken place over the last couple of years.

The goal as we all know of the act was to help the endangered species, and in certain respects it no doubt has done a lot of good.

In other respects, such as the one I have just described, it has been counterproductive, and we are now seeing letters from the Service about the prospect of naming the southern black bear to the endangered species list, and with naming a number of fish to the endangered species list, even so the population data that has accompanied some of these considerations, and some of these fish being on the endangered species list, they do not coordinate, but there is a proposal out now to list 263 of these additional species.

There is a list of proposed plans to be added to the endangered species list. Critical habitat will be delineated. We have already received letters to assist in determining where this critical habitat is, and at this point, we do not know what activities will be permitted in these areas of critical habitats.

We wonder where the hunting of the other forms of wildlife will be permitted. Will trapping be allowed, will habitat manipulating practices be permitted, and will the harvest of timber be permitted?

All of these questions remain to be answered, and we are also wondering how this similarity of appearance provisos in the act will be managed.

We think potentially we have a situation here that will create some problems that gravely exceed those we have already seen. We are also wondering how the similarity of appearance whether utilization of other forms of wildlife will be permitted.

If an endangered form of wildlife occupies those habitats, and it is occupied by another animal, we wonder if we will have a conflict there, and we think to a great extent, we know, we see the emotional situation that has developed in connection with the management of this whole problem, and we think that some of the decisions are made contrary to what the general public thinks should be done. We know we will have a lot of these problems to deal with, as we have had with the alligator and at present, the model cooperative agreement form appears to us to be quite one sided, with the workload and responsibility done by the State, whereas the control lies with the Federal Government.

Our State has passed an endangered species act. We have certain reservations about it. If we acknowledge the fact that anything on the Federal endangered species list would then be considered as an endangered species in our State, and we would have to have an adequate program for each animal or bird or fish that is on the list in order to continue the validation of such an agreement. So at this point we have a cooperative agreement under consideration, but we think they should be more balance brought into a cooperative agreement.

Those in control should share the workload which is not taking place at this time in Louisiana.

At present the model cooperative agreement form appears to be quite one sided with the workload and responsibility to be borne mainly by the States. As yet no Federal funding has been forthcoming. The act requires that the cooperative agreement will be invalidated if the States do not have a program for each and every endangered species on the Federal list. This does not make sense to us since it would appear that a program assisting some forms of endangered life would be better than none at all. In our opinion the cooperative agreement requirements are too stiff, too inflexible, and in drastic need of more balance between the State and Federal workload.

Under the provisions of Public Law 93-205 the Secretary of the Interior can take unilateral action in naming a resident form of wildlife to the endangered species list. He is required to consult with the States but concurrence is not necessary. At the time the endangered species bill was pending in Congress we suggested unsuccessfully that concurrence rather than mere consultation be required before listing a species of wildlife. Based on our experience over the past 18 months we feel more strongly than ever that a requirement of concurrence would have been most desirable. At this point however, we can only hope that proper weight will be given to the

views of the States. In our opinion, animals in abundance such as the gator should have never been placed on appendix I of the International Trade Convention and we would like to have it removed as soon as possible.

We understand this question was raised yesterday morning, however, apparently, they feel they are prepared to recommend this, and we hope to have the gator entirely off the endangered list for Louisiana within a year or two. It is our opinion that extreme care should be exercised to avoid naming a species as endangered or threatened unless it appropriately falls within this category.

Any favorable consideration that you can give to these comments will be appreciated.

I would like to add, Mr. Chairman, we think very careful weight should be given to the overall situation before adding something to the list, and any favorable consideration you all can give to these comments would be appreciated, unless someone sitting here feels that may be we have not done everything we should in Louisiana. I would like to briefly state that Louisiana has passed an endangered species statute, we passed a scenic rivers act that gives complete protection to major streams in the State against channelization, we have a bill enacted which provides total protection for all birds of prey, hawks, and so forth, eagles, and we are about to completely lose the bottom land hard woody ecosystem in Louisiana, with about 100,000 acres of this land being cleared out annually, and in 1960, when the handwriting was on the wall, we began a land acquisition program which involved the purchase of a number of areas occupying 200,000 acres in the State, and in these acquisitions, we are preserving entire ecosystems involving timberland, and the bird and fish and animal lives that occupy those areas.

We have also leased an additional 8,000 acres. Back in the 1920's the white tail deer would have been an endangered species. The animal was almost gone, and now we have 25,000 of these animals.

The wild turkey would have been extinct, but we have a successful program going with that, and then we have a species of woodpecker which was almost extinct, and without going into detail, we wanted to come here before you and try to emphasize some of the problems, to see if you could help us, and we do appreciate your listening to us.

Mr. LEGGETT. I want to thank you very much for your testimony, and I want to commend you after your actions in the Louisiana area.

We do have a conference between some of the State priorities and some of the Federal priorities, hopefully we can recognize that our actions will only work with full State cooperation, and that State input is extremely important, and I hope that in spite of the act, that we have perhaps more than just consultation, we get full cooperation between the Federal and State organizations, because, frankly, we do not have the manpower, and 70 or 80 billion deficit, we have no means of acquiring the manpower in the future, so obviously there needs to be a balance here, and I hope that you can work with the Federal agencies.

We are not going to resolve anything here this morning, but we do look forward to coming back in a few months and reviewing the matter again.

Mr. YANCEY. We agree that more will be done without friction, and that we will do better if we do not have friction between our two agencies, and in reviewing the section and the act pertaining to cooperative agreements, when you really study the working of those requirements, you get the impression, I do, that perhaps we are trying to negotiate an agreement between two foreign countries rather than between two agencies that really have the same goal, which is to protect fish and wildlife of this country, and we think that there should be more flexibility built into the provisions of those requirements that we have now.

Mr. LEGGETT. I hope that could be accomplished, and we will have more cooperative efforts going. Thank you.

Mr. YANCEY. Thank you.

Mr. LEGGETT. Our next witness is Joseph Poser, president, American Fur Merchants Association.

The Chair will announce that we will recess at 12:30, and eat from 12:30 until 2.

Mr. Poser, your statement is in the record. You may proceed.

#### **STATEMENT OF JOSEPH POSER, PRESIDENT, AMERICAN FUR MERCHANTS ASSOCIATION**

Mr. POSER. Mr. Chairman, members of the Subcommittee, I am Joseph Poser, President of the American Fur Merchants Association. Our association represents the majority of fur dealers throughout the United States. As the fur industry is largely centered in New York City, the businesses of most of our members are located there.

This association supported the Endangered Species Act of 1973 publicly and before this committee as we supported the Endangered Species Conservation Act of 1969. We continue to support the 1973 act in its purpose and design of protecting endangered wildlife species in America and abroad. We support the act out of keen self-interest, for the fur industry vitally depends upon a large self-sustaining wildlife population. If I do nothing else today, I want to drive home one point, and it is this—the fur industry respects wildlife conservation and needs it. The people of the fur industry today cannot afford to take furs indiscriminately, just as a forester cannot afford to level the forest or the farmer deplete the nourishment of the land without making careful provision for the future. We don't get a depletion allowance so we can't afford to have fur skins become a wasting resource. We support efficient and humane wildlife management today, because it, and it alone, will keep us in business tomorrow.

Before getting into the specifics of what has and is bothering us about the administration of the act, there are a number of facets of the Endangered Species Act and its administration affecting our industry which I would like to make eminently clear:

First: We are one of the very few commercial industries in the United States which is affected by the Endangered Species Act. The export of furs from the United States is bringing into this country annually about \$125 million of foreign exchange, a substantial contribution to our balance of payments. Unnecessary and

unfair obstacles to this trade which do not serve the goals of the act must be removed.

Second: The fur industry is one of the oldest in the United States, having arrived from abroad with the founding fathers of our nation.

Third: The use of fur skins for clothing is the foundation of our business. Unfortunately, those protectionists who oppose the taking of all fur-bearing wild animals, whether they be endangered or overpopulated, outnumber the members of our trade. However, as our members are in the mainstream of the supply of skins for the manufacture of garments, we indirectly speak for masses of consumers.

Fourth: In adopting both the Endangered Species Act and the Marine Mammal Act, the Congress recognized that the skins of wild animals are resources of great international economic significance; that such animals should be encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management; that the primary objective of that management should be to maintain the health and stability of the ecosystem; and last, but not least, that whenever consistent with that primary objective, it should be the goal of the Congress and the administrators of these acts to obtain an optimum sustainable wildlife population, keeping in mind the optimum carrying capacity of the habitat.

Fifth: We in the fur industry have no disagreement with these objectives, first because we believe in them; and second, because in both the short and long run, the continued existence of the businesses we conduct is completely dependent on the maintenance of wild animal species in sufficient numbers to permit the taking of a continuing supply without depletion of the stock, i.e., depletion below the number which can be healthily supported by the ecosystem in which they must exist. Were it otherwise, our industry would be foolishly marching toward its doom by the rapid depletion of stocks of animals on which we must depend for our livelihood.

Sixth: For these reasons we support efforts by the Congress and the administration to maintain "optimum sustainable populations" of all species, endangered or threatened, throughout the world.

Seventh: While supporting conservation legislation we are resigned to the fact that the protectionists will continue to damn our industry by describing it as the "enemy of animals" while they, in various forms, cover themselves with the mantle "friends of animals."

Eighth: However, we find no excuse or reason for the feeling which has too long and too often pervaded the attitudes of many of the personnel of the Fish and Wildlife Service of the Department of Interior, particularly many in the New York area. That attitude is that the members of our industry are a criminal fringe engaged in circumventing and sabotaging animal conservation measures, a fringe whose motives are not to be trusted, whose certifications under oath are not to be believed, and whose business is essentially beyond the law.

Ninth: We use this forum today in part to plead with the Congress, as well as the Government Agencies which have the difficult task of administering animal conservationist legislation, to put an end to that sort of attitude toward our industry and to commence treating us as honest businessmen living within the law and willing to cooperate to make more effective the controls sought by the law.

With that background and plea, I pass now to certain specific problems we have with the administrators of the act and certain inadequacies in the law and the regulations.

#### A. THE INADEQUACY OF SEIZURE AND STORAGE PROCEDURES

The raw skins we buy and sell will self-destruct in a matter of hours in hot weather and without carefully controlled temperature levels. Therefore, every seizure and every delay in clearance of raw skins being exported, imported, or shipped interstate, bring risks of serious damage to the skins and possible destruction of their values. The normal shipment of fur skins is of substantial value although dealt with by brokers and dealers on the basis of extremely low commissions or margins.

Seizures and delays in the clearance of raw fur skins of more than a few hours should not be permitted or authorized under the law or regulations except under circumstances which protect against damage to the goods. Otherwise, such seizures or delays constitute the taking of property without due process of law. For there is no one we can recover from for damage to our merchandise after we have gone through an extended civil or criminal proceeding resulting in a not-guilty decision.

Mr. LEGGETT. Are they not entitled to compensation at the present time if the seizure is in fact unlawful?

Mr. POSER. There is no provision in the law or in the regulation, for any kind of compensation, just as there is no requirement in the regulations made on the Fish and Wildlife Service to store furs safely.

Mr. LEGGETT. I guess you could file a claim in the Court of Claims if that occurred.

Mr. POSER. Yes, you could, but we do not see any reason why we should be forced to go to that expense when it might be possible to do things in a more regular way to protect the merchandise from the very beginning.

We, therefore, urge an amendment to the Endangered Species Act which would make it possible for Fish and Wildlife agents to hold seized fur skins or delay raw skin shipments for a period no longer than 48 hours without a hearing before a Federal Court or Magistrate, or an administrative law judge. In such independent tribunal the Fish and Wildlife Service should have the burden of establishing that there was reasonable cause for the seizure or for a more extended clearance delay and that the merchandise is properly stored to prevent damage under prevailing and expected weather conditions. After all, if no seizure or delay in clearance is involved, a fur merchant who violates the law can nevertheless readily be punished by fines or imprisonment. But it is going too far to add to these serious penalties the right to seizure and clearance delays without providing the owner, consignee or consignor the right to an immediate judicial review of the reasonableness of the grounds on which a government agent seized such a highly valuable but rapidly perishable commodity as raw furs.

#### B. NOTICE OF SEIZURE OR WITHHOLDING OF CLEARANCE

Section 12.11 of CFR title 50 requires that the Director of Fish and Wildlife Service shall as soon as practicable following his seizure of wildlife or furs and give notice to the owner or consignee. We submit that "as soon as practicable" needs a specific outside limit of no more than 48 hours. Spoilage of raw furskins frequently gets underway if any more than that elapses. Personal service of the notice, or immediate telephonic or telegraphic notice to be followed up by confirmation letter, is needed. The fur dealer may otherwise be irreparably injured.

In practice, the language "as soon as practicable" means no timely notification of seizure is given. When an enforcement officer refuses to release a shipment, the shipper too often finds out only indirectly after his forwarding agent tells him of the delay or the seizure. We recommend that the act be amended to provide for prompt and certain notification to the owner or consignee of both seizure and the withholding of releases of shipments for over 48 hours.

#### C. ESTABLISHMENT OF STANDARDS FOR STORAGE OF SEIZED SKINS

In addition to urging that a provision for the independent and speedy review of any seizure be provided for in the act, we urge an amendment which will require the Secretary to promulgate specific standards of storage protection to which every warehouse used by the Fish and Wildlife Service to store seized furs would be required to adhere. The standards would primarily address the problem of spoilage of raw skins and provide for their proper refrigeration. The regulations should be promulgated after consultation with interested parties.

#### D. ESTABLISHMENT OF AN INDUSTRY ADVISORY COMMITTEE

To this end we think it appropriate that an advisory committee be established, consisting of representatives from the fur industry which would advise us to proper standards for warehouse storage of differing kinds of skins. The Advisory Committee should best be given a broad mandate to advise as to other administration features of the Endangered Species Act and the Marine Mammal Act. Use of the Advisory Committee in such capacity would do much to: (1) Set informed standards which would come to grips with the interests of all parties affected by the act, with the benefit of expertise from all sectors; (2) provide a means of periodic review of these same standards; and (3) foster a new spirit of cooperation and understanding between the Government, conservation groups, the fur industry, and possibly other industries potentially affected by this law.

#### E. UNREASONABLE PACKAGE MARKING REQUIREMENTS

Our industry provided this committee in 1968 and 1969 with graphic testimony which demonstrated that the package marking requirements of section 44, title 18 of the United States Code were so unreasonable as to result in near 100 percent disregard for the

law. That section, before its amendment in 1969, made it unlawful to ship a package of wild animal furs, hides or skins, or parts thereof, in interstate or foreign commerce unless the package bore on the exterior surface an accurate statement showing the contents by number and kind and the names and addresses of the shipper and consignee.

Thefts from shipments in interstate or foreign commerce are openly invited by a package label which ipso facto identifies the contents as items of unusually great value such as wild mink furskins, being shipped from, for example, the XYZ mink company to the ABC fur company abroad. Such outward identification of the contents, the shipper and the consignee leaves no doubt as to the contents and unmistakably adds to the great likelihood of theft. This is as self-evident as it would be with a package of diamonds or \$100 bills, the contents and number of which were openly and accurately labelled on the exterior while passing through a stream of commerce.

In recognition of this present danger, the Congress in 1969 amended section 44 to permit the Fish and Wildlife Services to authorize the use of some other reasonable means of notifying appropriate authorities of the contents of packages containing furs in cases where the marking, labeling or tagging of a package, in accordance with section 44, indicating in any way the contents thereof would create a significant possibility of theft of the package or its contents.

However, the relief thus tendered our industry has been completely negated by the regulations adopted by the Fish and Wildlife Service in 50 C.F.R. section 14.83(a). They require that to obtain in lieu of the information otherwise required by section 44, the applicant for the symbol must provide to the Fish and Wildlife Service a description of and evidence showing thefts, if any incurred by applicant which can be ascribed to marking requirements of section 44, title 18, and section 14.81 of these regulations including dates, description of goods, place, if known, value, including affidavits, invoices, correspondence, and insurance claims relative thereto to conclusively show actual losses by applicant.

The fact that other fur businesses have suffered such losses, and that the fur industry has become a favorite target for thieves and hijackers appears to be of no consequence to the Service. Instead, before authorizing use of a symbol the applicant must show that his own business has experienced thefts which can be ascribed to the marking requirements of section 44.

Furthermore, the Service has required that the symbol used by an applicant must be preceded by FWS, now amended to WS, an obvious reference to the Fish and Wildlife Service and an obvious notice on the exterior of the package bearing the symbol that the package contains wildlife skins, hides, furs, birds, or parts thereof, off of which items normally are of extraordinarily high value and easily stolen and disposed of through established fences.

The shipping document accompanying interstate and foreign shipments of parts of wild animals are the proper place to identify the contents—not the exterior of the packages. But our insistence that the purposes of the 1969 amendment have been negated by the re-



quired use of the initials FWS as a part of all symbols authorized for use, and the requirement of production of evidence of actual theft by a symbol applicant, have fallen on deaf ears at the Fish and Wildlife Service.

These are totally unreasonable requirements which controvert what we believe was the clear intent of Congress and of this committee in 1969. We urge therefore that section 44 be further amended with adequate legislative history in the Committee report to make it unmistakably clear that a symbol marking is to be authorized in all circumstances wherein the marking requirements of the first three paragraphs of section 44 would otherwise give notice of the valuable contents of packages containing furs, skins, hides, and parts of wild animals.

#### F. BONDING PROCEDURES TO RELEASE SEIZED SHIPMENTS

The bonding of seized shipments is provided for the title 50, section 12.1 et seq. of the Code of Federal Regulations. However, neither the act sec. [11(e)(3)] nor the regulations establish or suggest the conditions of the bond necessary to effect the release of seized furskins; nor do they provide any guidance as to the conditions for eventual release of the bond in whole or in part. The law should be amended to specifically provide that the bond is to be released immediately upon the order of an Administrative Law Judge upon a finding that there is no longer any reasonable basis for failure to release the bond. The act should also be amended to provide that when a respondent in a civil penalty proceeding brought incident to the seizure of goods has exhausted all avenues of appeal or the time for an appeal has expired, the securities pledged as a bond are not to be applied by FWS to the payment of any civil penalty assessed against the respondent without his consent.

One member of our industry was accused by FWS not long ago of violating the Lacey Act. The skins involved were seized, poorly stored and, as a result, badly damaged. FWS allowed the accused to put up \$5,000 in securities to effect the release of the skins in the damaged condition. Later, when the civil penalty proceeding terminated in a not guilty decision by the Administrative Law Judge who heard the case, it took two weeks of indecision on the part of the Government before release of the bond could be effected. Such delays should be eliminated by spelling out in an amendment implemented by regulations of FWS the rules for the eventual release of bonds filed to effect the release of seized merchandise.

#### G. THE LOOK-ALIKE SPECIES AND THE LACK OF TRAINED ENFORCEMENT PERSONNEL

The right of the Secretary of the Interior, given under section 1533(e) of the act, to treat as an endangered species any species which looks like an endangered species is patently unfair. It is an unnecessary provision for the reason that experts available to distinguish species are readily available and, in the rare case where necessary, they could surely be summoned with short notice. The only effect which this provision has is to allow persons generally ignorant of furs to administer and enforce the Endangered Species Act.

The result of such ignorance is inefficient and unfair administration and enforcement.

The enforcement staff of the Fish and Wildlife Service in the New York area, where most furs move, is unfortunately a case in point. We hesitate to pick out a particular regional office for criticism, but the importance of the New York area to the fur industry is immense. The Fish and Wildlife Service should indeed initiate a program to educate enforcement officials about furs before giving them enforcement responsibilities which encourage the seizure of perishable, but highly valuable, raw skins. Because of the lack of such a training course, the fur industry is presently being subjected to unreasonable and unnecessary delays of shipments and the consequent risks of severe loss. We do not believe that any other industry is regulated in such an uninformed manner by the very officials with which the industry must deal every day.

As a consequence of lack of knowledge and understanding of furs and the fur trade, there is among many of the enforcement personnel of the Fish and Wildlife Service, an attitude which can only be described as "guilty until proven innocent." And this attitude is translated into practice. Legal shipments of furs have been seized without reasonable cause. In one case an officer refused to release a shipment even after he admitted that it was legal. Additional documents were demanded and a bond eventually had to be posted to obtain release. But release was not had until after the perishable fur skins were threatened with spoilage through exposure to midsummer heat. The owner was not allowed to move the shipment into cold storage, even after the enforcement staff had refused to do so. We forcefully object to this kind of harassment and submit that it is representative of a generalized and pervasive attitude. Accordingly, we request that this committee undertake to evaluate the administrative practices of the Fish and Wildlife Service, and require that the FWS initiate a program of education for the benefit of its enforcement staff. I am sure our industry would cooperate in any such program.

I must comment on another administrative practice engaged in by FWS which is unfair to our industry. FWS is taking time on network television—the NBC station in Boston on Saturday, September 20, 1975, and no doubt at other times on other stations—to warn the public against bringing into the country products made from endangered species. This ad is entirely misleading. It leaves the audience with the impression that importation of all furs is illegal and wrong. No distinction between legal and illegal furs is made. The ad does nothing to point out that the American fur industry does not import furs on the endangered species list and that American manufacturers do not make garments made of endangered species. We submit that any such message, if it is to be permitted at all, must make it clear beyond doubt that the American fur industry does not import furs on the list and manufacturers do not use materials from endangered species. We submit the only fair way to inform the public, and travelers particularly, is through the use of a pamphlet given to each traveler upon his departure from the United States listing products made from endangered species which cannot be brought in on return from abroad.

The public is not well informed about furs. A brief TV message without the benefit of a listing of products affected by the act can-

not be anything but muddled and tends thereby to discourage people from importing any furs. In its present form the message acts as an encouragement to boycott all furs.

The message says in part “\* \* \*think of the animals.” This anthropomorphic approach—the identification of human beings with the animals—is based solely on emotion. It is used continuously by some protectionist groups because it is an effective way to arouse people’s sympathy and support, but it has no place in wildlife management or in government policy and does nothing to protect endangered species.

The items used in the FWS television commercial are now on display at J.F.K. Airport. A sign announces that they were seized by U.S. Customs from arriving passengers. That display in its present form has no function other than to create prejudice against all furs. It must be removed. The TV commercial must be stopped, and the Fish and Wildlife Service must stop interpreting the law in a biased way.

In addition to our concern over the fairness of the TV ad, we wonder where FWS’ authority for engaging in expensive television advertising is found. Second, we feel that TV ads are insupportable in the face of the very lean budget under which FWS must operate. Such advertising is an inefficient allocation of funds and represents a poor choice of administrative priorities.

#### H. INABILITY TO SELL, SHIP, ETC. INVENTORIES OF FUR SKINS LAWFULLY PURCHASED

Under the law, when a wild animal is placed on the endangered species list it becomes illegal, except under the hardship exception of section 10(b), to sell, transport, ship, import, export or even possess the dead animal of such species or any part thereof. The section 10(b) hardship exception relates solely to goods subject to a contract of purchase, sale or shipment, etc., entered into prior to the effective date of the addition of the species to the endangered species list. But no provision is made in the law for the exception of skins of the species involved which are not the subject of any then existing contract but which are on hand in the inventory of a dealer, manufacturer, or other businessman on the date the species is added to the list. Such skins would be ones purchased prior to the effective date the species was listed—perhaps weeks or months prior thereto.

The ends of conservation are not served by making it impossible for the owner of skins already taken to sell or dispose of them. They clearly should be exempted from the prohibitions of the act through the device of a licensing or similar provision. In doing so it would be reasonable to provide by amendment for the registration of the skins in inventory promptly after the listing of the species together with submission of satisfactory proof that such skins were in the specified owner’s possession or control on the effective date of the listing. To discourage last-minute rush buying, it might also be proper to provide that no license be issued if the Secretary establishes that the skins involved in the license application were bought or contracted for after publication in the Federal Register of the Notice of Intention of the Secretary to add the species involved to the endangered species list.

If such an amendment is not adopted, legitimately owned furs taken before a species was added to the list are rendered completely worthless, and owners are unfairly penalized for legally acquired merchandise on hand on the listing date.

#### I. RIGHT TO OBTAIN INTERPRETIVE RULINGS FROM THE ADMINISTRATOR

The FWS has a policy of refusing requests from members of the fur industry for rulings on whether prospective courses of action would violate the laws which FWS is charged with enforcement. The only conclusion we can draw from such refusals is that the FWS would rather prosecute a fur trader ignorant of the full impact of the laws than to aid traders' understanding of such laws and thereby prevent potential violations. We believe that FWS should establish a procedure by which it will respond to legitimate questions concerning potential violations in a specific factual setting. The educational process served by such a program would serve the interests of enforcement far better than isolated criminal prosecutions or civil penalty proceedings, or the harshness and inequities of seizures or clearance delays.

Along these same lines, we request that the FWS periodically publish summaries of the foreign laws which they are aware of which could potentially affect the fur industry. The Lacey Act creates liabilities for engaging in various activities in relation to skins, hides, etc. taken, shipped, exported, etc. in violation of foreign laws and regulations. Our industry wishes to be well informed on such laws and regulations, but we are without the resources or facilities for ascertaining the nature and constrictions of such laws. The FWS, however, is in a position to help us and simultaneously serve their own interests as well.

In conclusion, I want to introduce a personal note and say that the chief enforcement officer for the New York area, Mr. Jack Downs, has recently shown an understanding of the problems we are encountering and a willingness to work out acceptable procedures in regulating the movement of fur shipments. We hope that the results of this offer will include improved clearance procedures to speed releases of shipments.

I think that the amendments and regulations we have proposed today offer more specific guidelines to the regulation of the movement of furs, and will thereby facilitate both our ability to transact business under the act and this government's ability to equitably administer the act while better serving the purpose of conservation. In this way mutual understanding will be fostered along with the very important business of doing what we can to make all species of animals self-sustaining.

Finally, our Washington counsel, Mr. James R. Sharp, will be glad to work with your Committee staff in working out the details of amendments I have proposed here today.

Thank you for the opportunity to be heard here today. I shall be glad to answer any inquiries any Committee member may have.

[The following was submitted.]

# SUMMARY OF ACTIONS PROPOSED BY AMERICAN FUR MERCHANTS' ASSOCIATION, INC.

The Testimony of Joseph Poser, President of the American Fur Merchants' Association, Inc., supports the following actions in respect to the Endangered Species Act and its administration:

## I. AMENDMENTS PROPOSED

- A. Requiring Expedited Determination by a Judicial Authority as to the Existence of Reasonable Cause for Seizures or Shipping Clearances Delayed over 48 Hours.
- B. Requiring Notices of Seizures Within 48 Hours.
- C. Routine Grant of Right to Symbol Marking of Packages Shipped Upon Request, Without Proof of Theft.
- D. Specifying Conditions for Release of Bonds Given on Release of Seized Merchandise.
- E. Eliminating Provisions of Sec. 4(e) Requiring That "Look Alike" Species Be Included on Endangered Species List.
- F. Authorizing Licensed Disposition of Inventories of Newly-Listed Endangered Species On Hand At Initial Listing Date.
- G. Authorizing Appointment of Industry Advisory Committee.

## II. ADMINISTRATIVE ACTIONS PROPOSED FOR FISH AND WILDLIFE SERVICE

- A. Establishment of Standards for Storage of Seized Skins Or Skins Shipping Clearance of Which Is Delayed by FWS.
- B. Establishment of an Industry Advisory Committee.
- C. Elimination of Requirement of Initials "FWS" Preceding Authorized Package Marking Symbols.
- D. Adoption of a Training Program To Educate Enforcement Personnel in Relation to Furs.
- E. Issuance of Interpretive Rulings Upon Application.
- F. Publication of Summaries of Foreign Laws and Regulations Relating to Purchase, Sale, Export and Shipment of Wild Animals and Parts Thereof.

Mr. LEGGETT. Thank you very much.

Of course, there are a lot of people, you know, that are not aware of the law, they buy things overseas, and they bring them back in, and customs agents say they cannot bring them in, they lose a lot of money.

Mr. POSER. I think that people who import heroin, whether they are aware of it or not, also lose a lot of money.

Mr. LEGGETT. That is right, but you try to tell them not to bring in heroin, and we try to tell them not to bring in endangered species, but I think that should present a very honorable and noble industry, after all the tanners and skimmers, such as that, are part of the original governing board of the old town of London, and certainly, the endangered species legislation was not intended to desecrate your industry, but it was done to protect certain live animals, and I would hope that we could enforce the law, with that in mind, I will look at our advertisements, and hope they can be tailored and enforce the law, and nothing more, so we will adjourn now until 2 o'clock.

[Whereupon, the subcommittee was in recess at 12:30 p.m.]

## AFTERNOON SESSION

Mr. LEGGETT. The afternoon session of the subcommittee will come to order.

Our first witness is Ms. Karol Lyn Newman, counsel, Archer-Daniels-Midland Co.

It is nice to have you here, Ms. Newman. Your statement will be incorporated into our record at this point.

**STATEMENT OF KAROL LYN NEWMAN, COUNSEL, ARCHER-DANIELS-MIDLAND CO.**

Ms. NEWMAN. Mr. Chairman, gentlemen, my name is Karol Lyn Newman, and I am appearing here on behalf of the Archer-Daniels, Midland Co.

I appreciate the opportunity to testify today. These oversight hearings provide both the opportunity and the forum to once again bring to the committee's attention the severe financial hardship imposed on my client, and others similarly situated, because of the retroactive nature of section 9 of the Endangered Species Act of 1973.

Archer-Daniels-Midland Co., as the subcommittee is aware, is currently holding approximately 8 million pounds of sperm whale oil, which, because of the prohibitions in section 9, it cannot export, sell, or transport in interstate or foreign commerce for commercial purposes.

Each and every pound of this oil was legally imported under U.S. Department of the Interior permits prior to the enactment of either the Endangered Species Act of 1973 or the Marine Mammal Protection Act of 1972.

All of Archer-Daniels-Midland oil was legally imported into the United States by permits issued under the Endangered Species Act of 1966. All of it was imported prior to the enactment of either the Marine Mammal Protection Act of 1972, or the Endangered Species Act of 1972. At the time the product was imported, Archer-Daniels-Midland Company necessarily assumed, and I believe rightfully so, that once it had imported the oil, it could be sold within this country.

Section 9, however, prohibits the selling legally of these acquired goods.

We are, therefore, caught up in what was aptly described by Congressman Gude in his testimony before this subcommittee in July 1974, as a government catch 22.

Congressman Studds at the same hearings, in speaking about the retroactive nature of section 9, referred to this as a congressional oversight.

This congressional oversight or governmental catch 22, as the case may be, is costing Archer-Daniels-Midland Co. not only the approximately \$3.2 million, which the sale of this product would bring at the current market price, but it is also costing approximately \$96,000 a year in storage expenses.

Mr. LEGGETT. Let me ask you this, can it be traced so it is not confused with illegal whale oil?

Ms. NEWMAN. Mr. Chairman, I do not see that as a problem.

The goods which were legally imported into the country are all reported in the U.S. Department of Interior permits.

There are reporting requirements in those permits which require that we report the sale of these goods. Once the goods have been disposed of, we have to report to the Interior Department the exact quantity sold, and once the legitimately acquired goods have been sold, in any case, with any company, that would be the end.

Mr. LEGGETT. Then the next part of the question, if we want to resell it, what happens then?

Ms. NEWMAN. I think if you will look through our written statement, we have proposed what we consider to be a fair draft amendment, particularly to alleviate this problem.

In that draft amendment, we have reporting requirements which will require the purchaser, excuse me, the seller, to provide a written guarantee to any purchaser of sperm whale oil that it was legitimately acquired, and report that to the Department of Commerce.

The purchaser then, upon acquiring the oil, will equally, in the same way, report to Commerce, sending a copy of the written guarantee of the seller. There are other reporting requirements which must be met within 90 days of acquisition.

Mr. LEGGETT. How long will it take to dispose of what you have?

Ms. NEWMAN. It is the company's estimate that it would take approximately 3 years or so to be able to dispose of everything that we now have in stock.

I am not quite sure how that timetable fits in with other people who may be in the same situation, but in our estimate, that is a fair amount of time.

Mr. LEGGETT. Very good.

Ms. NEWMAN. As this subcommittee is aware, amendments have been proposed by private interest groups to alleviate the financial hardships imposed on them by section 9 of the act.

These groups include the Scrimshanders and the purchasers of the GSA sperm whale oil. Amendments have also been proposed by the Department of Commerce and Interior, the governmental agencies charged with the responsibilities of enforcing and carrying out the provisions of this act.

Mr. Chairman, I will submit the rest of the statement.

Mr. LEGGETT. Very good. We are going to review your suggestions with the Fish and Wildlife Service, and we will take action.

Your statement is now in the record, and we thank you very much.

Mr. Oberstar?

Mr. OBERSTAR. On page 6 of your testimony, in the language of the suggested amendment, part B(i), which says submit to the Secretary of Commerce within 90 days of the effective date of this paragraph a complete and detailed inventory, et cetera.

Does that apply to everybody, every firm that now has sperm oil, and does it apply to others that you would sell this product to, that may or may not have such product in hand?

Ms. NEWMAN. At the current time?

Mr. OBERSTAR. Yes.

Ms. NEWMAN. The way this amendment has been drafted, any person seeking an exemption would have to comply with this 90-day reporting requirement for inventories and stocks on hand.

Mr. OBERSTAR. Whether or not they have it?

Ms. NEWMAN. That will lead you into the next part.

In part C on page 7(ii), we refer to the purchaser.

Now, any purchaser must, within 90 days after receipt of such product or parts, report to the Secretary what he has received, along with the copy of the guarantee that he received from the seller.

Mr. OBERSTAR. I think I understand your industry, on how it operates, who you sell to, but the thing that concerns me is the 8 million pounds being sold three or four times over and over again, the possi-

bility of deception creeping in, where we do not want it to creep in, would B(i) establish irrevocable presumption, that any firm that has not submitted a statement of holdings, would be assumed not to have any, and if you sold them 1 million pounds, and they sold 1½ million pounds, then they would be liable to suit?

Ms. NEWMAN. That is right, if that 500,000 pounds had not been reported to the Secretary of Commerce.

We did not write in any presumptions, in our draft amendment, however, we establish a burden of proof.

We have no objection to having a presumption that if the goods were not acquired legally, they may not be sold.

Mr. LEGGETT. Thank you.

I noted the Department has a provision for inspection, do you object to that?

Ms. NEWMAN. No; we have no objection to that.

Mr. LEGGETT. Thank you very much.

Ms. NEWMAN. Thank you.

[Ms. Newman's prepared statement follows:]

STATEMENT OF KAROL LYN NEWMAN, COUNSEL FOR ARCHER-DANIELS-MIDLAND COMPANY

Mr. Chairman, Gentlemen. My name is Karol Lyn Newman, and I am appearing here on behalf of the Archer-Daniels-Midland Company. I appreciate the opportunity to testify today. These oversight hearings provide both the opportunity and the forum to once again bring to the committee's attention the severe financial hardship imposed on my client, and others similarly situated, because the retroactive nature of Section 9 of the Endangered Species Act of 1973.

Archer-Daniels-Midland Company, as the Subcommittee is aware, is currently holding approximately 8 million pounds of sperm whale oil, which, because of the prohibitions in Section 9, it cannot export, sell, or transport in interstate or foreign commerce for commercial purposes. Each and every pound of this oil was legally imported under United States Department of the Interior permits prior to the enactment of either the Endangered Species Act of 1973 or the Marine Mammal Protection Act of 1972. The permits were issued under authority of the Endangered Species Conservation Act of 1969 and carried with them the necessary implication that the products imported pursuant to the permits could be sold. However, despite these permits, section 9 prohibits Archer-Daniels-Midland Company from selling its legally-acquired goods.

The company now holds a large stock-pile of sperm whale oil which, under Federal Law, can only be sold within state lines. The state in which the vast majority of Archer-Daniels-Midland's sperm whale oil is held, however, has enacted a law which is virtually identical to the Federal Law and prohibits the sale or transportation of parts or products of endangered species within the state. Thus, Archer-Daniels-Midland Company is "caught up in a governmental Catch 22"—to quote Congressman Gude in his testimony before this Subcommittee in July of 1974. ADM is therefore not only being denied the \$3.2 million which the sale of this product would bring at the current market price, but it is also being forced to incur storage expenses in the neighborhood of \$96,000 per year.

As this Subcommittee is aware, numerous amendments have been proposed by private interest groups to alleviate the financial hardships imposed on them by Section 9 of the Act. Those groups include the Scrimshanders and the purchasers of the GSA sperm whale oil. Amendments have also been proposed by the Departments of Commerce and Interior, the governmental agencies charged with the responsibilities of enforcing and carrying out the provisions of this Act. In the hearings held last July, Congressman Studds, himself referred to the retroactive aspect of the 1973 Act as an "oversight," for which remedial legislation was necessary.

ADM firmly supports and encourages the amendment of the 1973 Act to correct this oversight and allow the sale of legally-acquired goods. It also



fully recognizes the necessity for stringent enforcement measures to prevent smuggling and contraband sales, and has no objection to such provisions being included in any amendment.

An amendment which would allow the sale of legally acquired stocks on hand of whale parts or products will not weaken the Endangered Species Act by inhibiting enforcement nor will it lead to the killing of more whales. There is no reason why private industry should be forced to bear such an extreme burden in the name of conservation, when the burden can be easily eliminated and the public benefited by allowing sales of legally acquired oil.

It is also ADM's position that the continued prohibition of the sale and transportation of parts or products of whales does not further the purposes for which the Act was created; that even under present procedures, there can be no validity to the oft-repeated argument that the sale of legally imported sperm oil in interstate and foreign commerce will jeopardize the enforcement of the Act by making it difficult to distinguish legitimate sperm oil from contraband sperm oil; and that the ultimate cost of such an amendment will be far less than payment of just compensation to industry and private individuals for losses sustained.

The Endangered Species Act was created to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions. . . ." The passage of an amendment which exempts the sale of whale parts or products which were legally imported under permit can have no effect on the purposes for which the Act was written. The sperm whale oil, as we have stated, was imported before the passage of the Endangered Species Act of 1973 or the Marine Mammal Protection Act of 1972. Our proposed expansion of the amendment to cover all parts or products of whales legally imported will neither result in the destruction of the ecosystems in which these marine mammals live, nor will it affect in any manner the conservation of these animals.

The Department of the Interior itself has admitted that those who can prove that items were "legally obtained prior to the effective date of the Act . . . should be allowed to sell the items in interstate commerce. Such an exemption would not lead to the taking of additional animals." Testimony of Jack Gehringer, Deputy Director, National Marine Fisheries Service, Department of Commerce on H.R. 15893 and H.R. 16079 Before the Subcommittee on Fisheries and Wildlife Conservation and the Environment of the Committee on Merchant Marines and Fisheries, 83d Cong., 2d Sess. at 64-65 (1974).

Archer-Daniels-Midland Company has already expressed to this Subcommittee its concern with respect to two of the bills currently pending before this Subcommittee which would amend the Act—S. 229 and H.R. 3465. We would urge this Subcommittee to amend H.R. 3465 as follows:

In the preamble, strike the language "by the United States Government" and "from the national stockpile".

In Sec. 3 of the bill, after the language "shall not apply to any sperm whale oil covered by the first section of this Act" insert the following language: "or any other sperm whale oil legally held within the United States on December 21, 1972".

I Section 4 of H.R. 3465, after the language "Endangered Species Act of 1973 involving sperm whale oil" strike the language "sold under the first Section of this Act" and insert the following language: "exempted from the prohibitions of Section 9(a)(1)(A) and the prohibitions in clauses (E) and (F) of Section 9(a)(1) of the Endangered Species Act of 1973 (16 U.S.C. 1531).

If this Subcommittee elects not to recommend passage of H.R. 3465 we would urge that the salient features of both H.R. 3465 and S. 229 be combined into one amendment which would deal exclusively with marine mammals of the order Cetacea. We therefore propose the following amendment:

*"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that Section 10(b) of the Endangered Species Act of 1973 (87 Stat. 896, 16 U.S.C. 1539) is amended by adding at the end thereof the following new paragraph (4) to read as follows:*

*"(4)(A) The Secretary of Commerce may grant, under such terms and conditions as he may prescribe (including, but not limited to, registration of inventories, keeping of complete sales records, provision for duly authorized agents of the Secretary of Commerce to have the right to inspect inventories*

and records, and filing such reports as the Secretary of Commerce may require), exemptions from the prohibition in clause (A) of Section 9(a)(1) of this Act insofar as it relates to the export of the products or parts of marine mammals of the order Cetacea, and from the prohibitions in clauses (E) and (F) of Section 9(a)(1) of this Act to those persons who satisfy the requirements of subparagraph (B) of this paragraph for the movement or sale in interstate or foreign commerce of products or parts of marine mammals of the order Cetacea if such products or parts were lawfully held within the United States on December 21, 1972; *Provided* that no such exemption may be granted or effective after three years following the effective date of this paragraph.

“(B) Any person seeking an exemption under paragraph (A) shall—

“(i) submit to the Secretary of Commerce within 90 days of the effective date of this paragraph a complete and detailed inventory of all holdings of products or parts of marine mammals of the order Cetacea. Exemptions shall be granted by the Secretary under subparagraph (A) only with respect to products or parts reported in such inventories;

“(ii) apply for such exemption in writing to the Secretary in such form or manner as the Secretary may designate; and

“(iii) supply the Secretary with such sales records, reports, permits or other documents to show that such products or parts for which the exemption is being sought were legally acquired prior to December 21, 1972.

“(C) (i) Any person granted an exemption pursuant to this paragraph with respect to holdings of products or parts of marine mammals of the order Cetacea and any subsequent seller shall upon sale or delivery of such products or parts supply a signed, written guaranty to each purchaser of such products or parts certifying that such products or parts may lawfully be sold, transported, or exported pursuant to the terms of an exemption granted under paragraph (10)(b)(4) of this Act. Any such guaranty shall include the name and address of the person who obtained the exemption authorized by subparagraph (A) of this paragraph and the date on which such exemption was granted.

“(ii) Any purchaser of products or parts of marine mammals of the order Cetacea shall, within 90 days after the receipt of such products or parts, submit to the Secretary a report, in such form or manner as the Secretary may designate, specifying the quantity of such products or parts received, the name and address of the seller, a copy of the guaranty supplied pursuant to clause (i) of subparagraph (C), and the date on which such products or parts were received. Any such purchaser shall comply with such other terms and conditions as may be prescribed by the Secretary.

“(D) In connection with any action brought for a violation of the provisions of Section 9(a) of this Act, any person claiming the benefit of an exemption granted pursuant to Section 10(b)(4)(A) shall have the burden of proving that such products or parts are covered by such exemption.”

In our opinion, an amendment such as that suggested above, would provide appropriate relief for companies, such as ADM, private individuals and sole proprietorships such as the scrimshanders, and government agencies, such as GSA, which find themselves unable to dispose of stocks of whale parts or products lawfully imported and lawfully on hand.

The draft amendment is limited to whale parts and products. This would therefore include the scrimshanders as well as the sellers and purchasers of sperm whale oil. The amendment has been limited in this fashion in order to avoid the problems inherent in policing and enforcing such a provision by the Department of the Interior with respect to parts and products of endangered species within its jurisdiction. The Department of Commerce has itself stated that it anticipates little or no enforcement problems with regard to the endangered species within its jurisdiction were an amendment allowing the sale in interstate and foreign commerce of legally acquired stocks-on-hand to be passed.

The suggested amendment establishes a procedure whereby stocks of sperm whale oil subject to the amendment would be identifiable and traceable as they move through commerce. The suggested procedures should enable the Department of Commerce enforcement officers to easily distinguish between sperm whale oil covered by the amendment and any such oil that might have been brought into the country unlawfully.

The devastating effects of the abrupt change in the policy regarding sperm whale oil and other whale products is just beginning to become apparent. Numerous industries which have depended upon the availability of sperm

whale oil for manufacturing and lubricating purposes have been forced to discontinue such usage without time for industry to develop an adequate substitute. All indications point to the fact that if the current stocks-on-hand are allowed to be sold, industry will be given the necessary amount of time in which to develop an adequate substitute. Without an adequate substitute millions of dollars will be lost by private firms whose current production depends on the availability of sperm whale oil and which has not had sufficient time to develop adequate substitutes. Attached as Exhibit 2 is an excerpt from the New York Times which gives an example of the kind of problems which arise out of the unavailability of sperm whale oil or an adequate substitute.

We are not advocating the killing of any additional whales nor are we attempting to create a substantial U.S. market for the sale of sperm whale oil. Indeed, all would benefit from a policy which allows the whale to rebuild its population and allows industry sufficient time to develop sophisticated substitutes to sperm whale oil which may ultimately become cheaper and more easily obtainable than sperm whale oil. The position we are advocating would do just that. It would not entail any further killing of whales, it would not cause industry to face severe financial problems from lack of a substitute and it would provide sufficient time to develop the substitute. We do not wish to see United States industry subjected to substantial financial losses due to its inability to sell legally imported oil and/or acquire legally imported oil for use in manufactured products.

It takes time to develop an adequate substitute for sperm whale oil and the legally acquired stocks-on-hand will give us that much needed time.

Mr. LEGGETT. Our next witness is Daniel A. Poole, president, Wildlife Management Institute.

#### **STATEMENT OF DANIEL A. POOLE, PRESIDENT, WILDLIFE MANAGEMENT INSTITUTE**

Mr. POOLE. Thank you, Mr. Chairman.

The institute is not satisfied with the rate of progress in implementing the Endangered Species Act of 1973. Actually we doubt if anyone is content in that regard, including those responsible for administering the act.

But it would be a mistake to heap the blame on a few administrators and overlook some very basic problems that have hindered or prevented adequate attention being given to threatened and endangered species as authorized in the 1973 statute.

As you know, the act is a pervasive and complicated law which required time to interpret and develop regulations.

And a further complication was the fact that the act became operative immediately on passage. Congress put Fish and Wildlife and National Marine Fisheries Service personnel into the game without giving them an opportunity to warm up. In addition to gearing up, the two Agencies have been playing catchup. This accounts for much of the misunderstandings and difficulties, I think, in the last 21 months.

Our statement discusses the shortfalls between what the Fish and Wildlife Service has requested, what the Interior Department and OMB have allowed, and what the Congress has provided.

I read the statements given yesterday by Director Greenwalt of the Fish and Wildlife Service and his assistant, and by the National Marine Fisheries Service. I find them constructive and agree with their assessment of the situation and their discussion of the problems.

Finally, I think as brought out in the statements of the individuals from the Fish and Wildlife Service, I would like to single out for particular attention the recommendation that the State Fish and

Wildlife agencies be brought firmly into the implementation of this act under the section 6 authority.

We too agree with the Federal Agencies that the eventual success of this program will rest on how well, and how closely the State Fish and Wildlife agencies are brought into it. We would hope, as time goes forward, that the authorized appropriations for the section 6 authority will be granted.

Mr. LEGGETT. Thank you very much.

You agree that this program is underfunded?

Mr. POOLE. Yes.

Mr. LEGGETT. What kind of budget do you believe you will need?

Mr. POOLE. I do not have the figures in mind, but at least we need initially to get the authorized limit. Appropriations are considerably short of that level now.

Mr. OBERSTAR. You cite a total of 13 people working on the program, page 2 of your statement.

Is that really adequate to respond to the needs?

Mr. POOLE. No; it is not.

Mr. OBERSTAR. How many people in your judgment would be necessary to do an adequate job?

Mr. POOLE. I don't know, Mr. Oberstar. I would rest on the opinion of the Director of the Fish and Wildlife Service, and on the National Marine Fisheries Service.

Mr. OBERSTAR. How about a horseback estimate?

Mr. POOLE. I would say probably 16 or 17 professional personnel. I really cannot say. Certainly it is not adequate now.

Mr. OBERSTAR. That is the thing that bothers me, about the whole Fish and Wildlife Service, our oversight hearings earlier this year indicate the personnel have been kept about the same for about 5 years.

The chairman had the foresight to have these oversight hearings, and it is very disturbing that the administration has not seen fit to increase the size.

You cannot run the program if you have not got the people to do the job.

Mr. POOLE. And much more responsibility has been added.

I think in terms of real dollars, the Fish and Wildlife budget today is about equal to the 1970 budget.

Mr. OBERSTAR. One question that comes up, in my part of the country, we have much to do with the status of the endangered species of the timber wolf.

Recently there was some controversy in the northwest part of the State of Minnesota, over a timber wolf that had been traced to the killing of several head of cattle.

When relief was not provided in the form of authorized members of the Fish and Wildlife Service, or somebody deputized by them to go out and take care of the animal, the Department took it into its own hands and meted out justice.

What kind of mechanism do you see should be developed within the Service to respond to this kind of problem?

Mr. POOLE. Mr. Yancey, from Louisiana, brought out this morning that it is extremely important to move this authority and capability nearer to the field.

The attitudes of the individuals and property owners differ tremendously across the country. To have the capability of action and reaction out near where the problem exists, I think is much superior than having a distant sort of administration as we have today.

Mr. OBERSTAR. I think that kind of thing would be very important, and to your prestigious organization, I continue to support that.

I think that would give creditability to the program nationally, because a few bad situations tend to focus discredit on what is normally a good program.

Mr. POOLE. As Mr. Yancey brought out this morning, I think a parallel situation exists in Minnesota.

The State has a fine wolf management program, and I see no reason to dislodge them from it on the basis of some superior Federal taking.

Mr. OBERSTAR. Do you see any problem in a system that can establish in this case, the timber wolf, as an endangered species nationally, but not a danger in the State of Minnesota?

Mr. POOLE. That would be the only reasonable alternative.

Mr. OBERSTAR. Thank you.

Mr. LEGGETT. Thank you, Mr. Oberstar.

You indicate in your testimony, Mr. Poole, that the Service needs at least 12 additional staff to handle the duties commensurate with international trade of endangered species treaty, let alone other things mandated by congressional action.

Also, you have got some very good statistical information, at the amount requested by the Service, to wit: \$9.2 million in 1976, the amount granted by OMB, \$7.3 million, and we did raise that in the House, how that comes out, so we are in a dilemma, and we hope to resolve it.

Your testimony is very helpful.

Mr. POOLE. Thank you.

[Mr. Poole's prepared statement follows:]

#### STATEMENT OF DANIEL A. POOLE, WILDLIFE MANAGEMENT INSTITUTE

Mr. Chairman, I am Daniel A. Poole, president of the Wildlife Management Institute with headquarters in Washington, D.C. The Institute's program has been devoted to the restoration and improved management of wildlife and other renewable natural resources since 1911.

The Institute is not satisfied with the rate of progress in implementing the Endangered Species Act of 1973. We doubt if anyone is content in that regard, including those responsible for administering the Act. But it would be a mistake to heap the blame on a few administrators and overlook some very basic problems that have hindered or prevented adequate attention being given to threatened and endangered species as authorized in the 1973 statute.

The Act itself is a pervasive and complicated law which required time to interpret and develop regulations. And a further complication was the fact that the Act became operative immediately on passage. Congress put Service personnel into the game without giving them an opportunity to warm up. This fact alone accounts for much of the efforts expended in the 21 months since enactment.

The Fish and Wildlife Service has initiated the administrative machinery to handle some of the workload associated with the Act's implementation. Rules and regulations have been developed. Coordinating and cooperative agreements have been worked out with other federal agencies. State wildlife agencies have been briefed on their role under the Act. A model nongame and endangered species bill was developed and distributed to the states. Guidelines were drawn up to help states prepare cooperative agreements. Federal agencies were notified of their responsibilities under Section 7 of the Act. Methods were

developed to implement the "critical habitats" part of Section 7. Fifty recovery teams have been established. These are only a few of the accomplishments, and, things are beginning to happen.

Seven states have qualified for cooperative agreements under the Act, and four others are in the process. Six species were added to the endangered list recently. Two others changed status and still others were delisted. The work is just beginning, however. Issues remaining to be resolved between the states and the Service include such subjects as legal interpretations, delineation of responsibilities, implementation procedures, and permit issuing for taking. But overall, the Service has performed admirably, given the circumstances under which it has been obliged to operate.

Those circumstances involve mainly a lack of personnel and funding to do the job. Congress responded to public demand for a comprehensive act to assist threatened and endangered species, but it has failed to follow-up and provide needed people and money. The Administration has not helped much either. The public criticism for this has fallen, and continues to fall, on the Service.

The Endangered Species Act of 1973 was enacted on December 28 of that year, midway in the 1974 fiscal year. At that time the endangered species program had a budget of \$4,372,000 and seven professional employees plus three clerical staff. The Fish and Wildlife Service requested a supplemental appropriation to help implement the Act but that was deleted somewhere between the Service's request and Congress. By robbing Peter to pay Paul, the Service was able to scrounge three more professional people for the Endangered Species Office, making a total of 13 working on the program.

For FY 1975, the Service requested \$10.3 million to implement the program plus \$3.3 million for grants-in-aid to the states. The Interior Department cut that request to \$5,267,000 with no grants-in-aid money. The Office of Management and Budget subsequently raised the request to \$5,527,000 with no grants-in-aid money. Congress, however, appropriated only \$5,480,000 with no money for the grants-in-aid program.

For FY 1976, the Service requested \$9,280,000 plus \$2 million for grants-in-aid. The Department subsequently reduced the request to \$7,680,000 and again cut out the grants-in-aid money. OMB then reduced that to \$7,374,000. The House recently upped that amount to \$7,632,000 plus \$2,000,000 for grants-in-aid. The Senate has not finalized its version yet.

It appears that Congress, for the first time since the Act passed, this year may provide somewhere near the needed funds to expedite the threatened and endangered species program. Hopefully it will not be at the expense of other important programs of the Service, such as refuges, as has often been the case in recent years. Additional funds will not solve personnel problems, however, with ceilings in effect as they are now. Something must be done to overcome that problem. Presently the Endangered Species Office still has only 16 personnel . . . 11 professional and 5 clerical. The International Trade in Endangered Species of Wild Fauna and Flora Treaty went into effect July 1, 1975. The Service has estimated that it needs 12 additional staff just to handle the duties commensurate with that treaty. Without more people, the Service will fall further behind responding to the onslaught of endangered and threatened species responsibilities.

Many people appear ready to judge the program's success by how many species are added to the lists. Placing reliance on listing would be a fundamental error. The program will be successful only to the extent it enhances threatened and endangered species' habitat. Adding a species' or population's name to a list will not save it. Its salvation is in the maintenance and improvement of habitat. Thus success ultimately will be gauged by how many species are removed from the lists rather than added. Yet the federal government has not come up with the people and money to contend with its vast new responsibility.

Probably the most direct assistance for improving threatened and endangered species habitat in the 1975 Act is the grants-in-aid provision which would help the states upgrade their wildlife programs. The Service knows and readily admits it cannot properly manage the resource alone. State wildlife agencies must become involved as equal partners with the federal government in this important undertaking. Many states are doing a good job now. They have an unparalleled number of qualified personnel and local knowledge. A recent study conducted by the Wildlife Management Institute for the Council on Environmental Quality and the Interior Department revealed that 36 reporting states were investing almost \$3.5 million annually in nongame and endangered fish and wildlife. The report from that study defines how much is being invested and

how much is needed at state, federal, and educational levels. It contains specific recommendations for improving and funding nongame fish and wildlife programs nationwide. The study marks the first time important funding information on nongame species has been gathered and analyzed on a national scale. I submit copy of that study report for the Committee's information and will be glad to supply individual members with copies if you so desire.

The 1973 Act has overruled many of the states' authority to manage threatened and endangered species. Without grants-in-aid, some states will not be moved to place the needed emphasis on threatened and endangered species because they now are a federal responsibility. We believe grant-in-aid funds could be a most important part of the overall national program because they would involve the states and would be used out on the ground where species can be helped.

Although progress has been made, we should keep it in perspective and not become complacent about the lack of funds and personnel now so apparent. It costs \$3200 to list species. That includes an average of 36 professional days and 5 clerical days of labor. At the moment there are about 3606 species being considered for listing. That's 147,846 man-days or about 590 man-years of labor. It would take the 16 people now in the Endangered Species Office approximately 37 years and almost \$12 million just to list the species already under consideration.

For knowledgeable persons expect the Service or the states to have sufficient resources to fulfill the demands of the 1973 Act within any reasonable time frame. The number of plants and invertebrates that may warrant threatened or endangered status under the Act are tremendous. There may never be enough manpower or money to manage them all. That does not mean, however, that a good program is not possible. We believe a respectable national program for major threatened and endangered species is possible in the near future if the Administration and Congress will provide the necessary money and manpower. Despite Congress handing it an Act that placed immediate operational and program responsibilities upon it, the Service has laid the groundwork for a sound and responsive program. The small endangered species staff has molded and assembled the building blocks for a sound program. It is time that the Administration and the Congress provide the needed mortar.

Mr. LEGGETT. Our next witness will be Mr. Kenneth J. Feld, executive vice president and coproducer of Ringling Bros.-Barnum & Bailey Combined Shows, Inc., and Mr. Robert Thrun, general counsel and director of the same organization.

**STATEMENTS OF KENNETH J. FELD, EXECUTIVE VICE PRESIDENT AND COPRODUCER; AND ROBERT THRUN, GENERAL COUNSEL AND DIRECTOR, RINGLING BROS.-BARNUM & BAILEY COMBINED SHOWS, INC.**

Mr. FELD. Mr. Chairman, gentlemen, today we would like to address our comments to the questions which have arisen out of our actual experience with the Endangered Species Act of 1973.

Mr. Robert Thrun, our general counsel will direct some comments specifically to that, but before I go into that, I would like to speak a little bit about the history and some of the background of Ringling Bros.-Barnum & Bailey Circus.

This year we are 105 years old, and we have been operating continuously for that period.

We are known as the longest running hit in show business, and we are really the major forum of family entertainment for the masses in America today.

In 1974 we appeared before 6 million patrons. This year it will exceed that, and at the inception, when P. T. Barnum began, the first thing he did prior to going in a circus, was to have a traveling

zoo and menagerie, which was probably one of the earliest zoos in the United States.

It has been the custom, ever since that time, for Ringling Bros. to display exotic rare animals, and now what are known as endangered animals.

Since Ringling Bros. appears in 80 cities each year throughout the United States and Canada, in over 35 States, it gives many of the people a chance to see animals where there is no major metropolitan zoo, or maybe there is no zoo at all, and what we are doing, we are bringing these rare and exotic and now endangered animals to them for educational as well as entertaining purposes.

Mr. LEGGETT. How about circuses, are they not a rare and endangered specie?

Mr. FELD. It is a very difficult proposition.

I must say, there are about 20 circuses in America today traveling.

Mr. LEGGETT. Is that so.

Mr. FELD. This year we are celebrating America's Bicentennial, as we will next year with our shows, and we have been in every city we go to. The public schools many times, one of their field trips, one of their annual field trips that year is they take all of the students to see Ringling Bros.-Barnum & Bailey Circus, and what we do is in addition to the animals, you get to see the interaction between man and the animals, and all of the animals are displayed in their majestic beauty, and they are doing feats that are not unnatural feats. they are things that are natural to the animal, that we have applied some other element, and they are entertaining.

Mr. LEGGETT. Your complete statement will appear in our record.

Mr. FELD. Yes, sir.

What I would like to go into though, and bring to your attention is that today we have in our shows 43 tigers, 34 of which have been bred and raised actually in our circuses, and this brings up many problems, because in order to breed and raise a tiger, it costs approximately \$5,000 each year per tiger, so that is for feeding and for care, and so the problems we have is that we have 43 tigers that are presently used in our shows, and we can breed probably 20 tigers a years or more with no problem, except that it is a financial drain on us, and if we have problems in getting any economic benefit out of them, there is no incentive to breed and raise tigers outside of our own need.

A problem that we may have in the future is that we now have 54 elephants. Right now I believe one of the only successful breeding programs for elephants is in the Portland Zoo. We are focusing our attention now on the breeding of elephants, but if we are not able to import elephants, the gestation period for an elephant is about 24 months, so there is a time lag on any research that we can do on the actual breeding, and then the actual birth of an elephant, the time period could be anywhere from 10 to 15 years.

So we would like to bring your attention to some of these problems. Mr. Thrun will now direct his comments to some more specific problems.

Mr. LEGGETT. All right.

Mr. THRUN. Mr. Chairman, members of the committee and staff. I am not going to repeat the legal points that I have made in our statement.



First of all, we have these new regulations, and while we have the interstate problems, that may clear them up, but we need time for study of the new regulations.

There are certain areas that the new regulations do not clear up. We travel not only in the United States, but into Canada, and that involves the international aspect, and one of the problems, as we have listened to the testimony in this hearing, is that there is a dichotomy between the domestic and the international problem here, and I think that in many ways our problem is more in the international field, except in the breeding of captive animals.

What I would like to do, and I do not know what the time span is, is to be able to examine those regulations more carefully.

There are questions. Mr. Baysinger said this morning that you could have permits in interstate sale of these animals.

My understanding is that you would have to show that the sale was for scientific or propagational purposes, which is a vastly different thing than just being able to obtain an interstate permit in 90 days.

I do not know if I am right or wrong, but it will take a study to find out.

What I would like to do is come up with carefully thought-through recommendations or comments.

Mr. LEGGETT. Very good. If you present those to the subcommittee, we will be sure to consider them.

Mr. THRUN. We have had the captive animal problem as Kenneth has mentioned, and we think there might be the possibility of breeding elephants by artificial insemination. These problems are of such scope that they cannot all be done by one entity. That is the kind of thing we would like to address ourselves to.

We confess we were caught asleep by the original act, partly because we are a traveling show.

We are not in one place all year round. We tend to our business, and also any bill labeled protective of animals is something we would be for, and so some of our comments are somewhat late.

The other field in legislation that may be a problem, and it may not be, is that in different States we face rather tough regulations.

Now, you have a good clause in the law on that, but we move in and out fast, and if somebody demands that we file things, regardless of the legal situation, it can hold us up, and by the time we get around to injunctions and things, we are supposed to be in Providence, R.I., or some place in another State.

Now, the rest of my comments you will not find as such in the statement. It is partly because I am a little piqued by some of the references; for example, one statement mentioned that humanitarians are for this law, and it should not be changed in any respect.

I have done a lot of work gratis as a counsel and vice president of a charitable organization that has distributed millions of dollars. I cannot mention the name because I do not want them to seem to be endorsing my statement, but I think they think they are humanitarian, so I wonder if despite this I am antihumanitarian because I believe this law requires some change.

I will come back to that. There is also the suggestion of whether profit motive is not somehow the wrong thing; whether it is exploitation.

I will not go into Mr. Lentz' comments on paying taxes. I think he covered that well. I will say that the people in this business are in it because they are show business people and they could make as much or more money if they were in another business, but there is something peculiar with this business, that they go into and follow through, that you do not find in the ordinary business.

Their pride is in putting on a quality show, and I think it is the greatest show.

I go to it every year, and I still think it is the greatest show. It is a family show. It is a show nobody need be ashamed to go to. It does not have - ratings. I can remember trading out a television agreement long before the agitation about smoking and that sort of thing. Early in the 1950's, we insisted on provisions in our contracts that there could not be certain types of advertising which were inconsistent with the family show we were putting on. I am sorry that Representative de la Garza is not here, because he mentioned the King Ranch.

We are proud of the fact that Bob Kleberg sold us 50 quarterhorses that they had bred on the King Ranch, and the relationship goes back so far that Dr. Henderson, who is our well-known veterinarian was actually recommended to us by Mr. Kleberg.

Now, Kenneth has mentioned that 6 million people went to our show last year. I might say that 500,000 of these were gratis tickets given to children, orphans, and others, who would not have otherwise been able to see a show, and I think when we are considering humanitarian considerations that has some value.

We also have specialized personnel. We have 300 actors. We are the biggest employer of circus acts; not only in this country, but in the world.

A lot of the those acts cannot have employment otherwise. In fact, the Ringling Bros. Circus gives them a guaranteed year-round employment of a kind that is available to no one else.

Recently, Kenneth's father, several years ago now, was worried about the supply of clowns, just as we are worried now about Indian elephants, and he started a tuition-free clown college.

Last year we had 3,000 applicants. We can only take 50.

The people that go to this college are not usual types of people. They may find they are at home in a lifetime of activity that they would find no place else.

I have known and observed some of them, and I do not use the word invidiously when I say that some of them are clowns 24 hours a day.

Mr. LEGGETT. How long is the course?

Mr. THRUN. The course is 8 weeks, and it is under the direction of Lou Jacobs, and others who are master clowns.

They put on a show at the end of the program, where each one does his own skit, and each year some are employed by us, and some elsewhere, and it really keeps the show alive, fresh and young.

Mr. LEGGETT. There are some of these same types on the House floor.

Mr. THRUN. The other thing I might mention is that we do play in 80 cities, and this is in arenas, most of which are municipally owned. We are by far the biggest attraction in most of the arenas.

It goes so far that in New York City, with all their basketball and hockey, we are still the single biggest thing.

Now, that means our continuity, and you mentioned the possibility that we were in danger of being an extinct species. Our continuity is important to many other people as well, and I bring all these things together under humanitarianism, because it seems to me, if you are humanitarian, you look at all considerations.

You are not just humanitarian because you like animals. Maybe you are humanitarian because you like people, and you like people in jobs.

Now, going back to the one thing that I think does have some legal connotations, though it is certainly not limiting on your power to do as you feel appropriate, we come to the Convention. The international Convention is far broader than the 1973 act.

The test for obtaining a permit under the Convention is whether or not it is detrimental to the survival of the species.

It is not limited to propagation or scientific purposes. Even if this is not limiting on you because the Convention permits the parties to draw narrower legislation if they see fit, it does show that the nations that sat down and considered this problem recognized that the real thing you were aiming at was the survival of the species.

The Convention also provides a special provision for traveling circuses, zoos, menageries, and that is that permits, and they are talking about international permits, with respect to endangered as well as threatened species may be waived entirely for such traveling circuses, etc. in the case of captive animals or pre-1975 animals. This provision shows that the people who drafted the convention did not think there was anything invidious about circuses or the international transportation of animals for circus purposes even to the extent of waiving permits under certain circumstances.

Now, we come to some general, very general recommendations, and in a way, I do not want to trespass upon what really is the function of the committee, but I think if you have not read it, there is a book, and I do not recommend your reading all of it. It is called the Sunlight Dialogues by John Gardner, the novelist, not the ombudsman. This part concerns a Congressman. He was the grandfather. Just before he dies he said while he did not regard his function as just representing one group or the other, or even of compromising points of view, what he thought his function was, and I have seen this exhibited here, and I am proud to see it exhibited, was to take some matter of policy, or some piece of legislation, where proponents are too eager, they go too far, and to consider the points made by the people on the other side, and without compromising the policy of the bill he tried to make that legislation liveable. I think what can be done here is to retain and adhere to the policy behind the law, which is the survival of the species, and then permit those things that do not endanger the survival of the species, or threaten it.

This morning there was reference to the fact that the narrowness of the present legislation gave the Department of Interior a good handle.

My suggestion is that perhaps they should not have quite that good a handle, that they should protect the public and interest of the legislation 100 percent, but not 110 percent. I think if they have more power than they need, or more restrictions, such as the limitation to scientific and propagational purposes, than are required by the policy

of survival, they will use it, and other ombudsmen will get them to use it, rather than considering the legitimate interests, and being subject to the oversight, which I think they should be, of people who are elected to office.

A number of years ago, this is a small sphere, I was a village attorney, and I always followed the policy that entrance to village government should not be through the attorney, but through the elected officials, because they have the responsibility to the public, and they have to answer to the public.

I will close by referring to a trip I took a couple of years ago to Japan with my wife, and we went to a temple in Nikko. There were reliefs on the building. One depicted the original of the monkeys, see no evil, hear no evil, speak no evil. On another, an elephant, and I think some other animals, were depicted by somebody who had never seen an elephant, and it was fine, except the trunk was upside down.

I do not think we should have the time come here when we have to depend on television programs to see and feel the presence of animals.

Thank you.

Mr. LEGGETT. Thank you very much, Mr. Thrun, and Mr. Feld.

We have your book here. I do not think we will put it in the record, but it is a fine sample of some of your fine capability, and I want to thank you for the work you are doing on behalf of Americans, and salute you on behalf of the Congress of the United States, and all of your associates in the circus business.

I know it is a labor of love, and not necessarily of compensation, and it has survived better in Europe than it has here, perhaps in large part because of our extensive television capability.

I think that the downgrading of display of animals in circuses and zoos, is something that is entirely synthetic. I think the American people still fully support the idea, and in it being their only opportunity to see a wild animal, and unfortunately, they cannot travel to the wilds, and I have just been to Africa, and I have tried to see animals in the wild, and, believe me, they are difficult to see.

I appreciate your working with the subcommittee, and with the Fish and Wildlife Service, and we hope to make this legislation workable.

Mr. OBERSTAR. Can you tell me how many different species of animals that are on the endangered species list which are part of your regular performance?

Mr. FELD. Right now in numbers of species, I would say it is probably about four or five.

There are some in question, because they are included in proposed new listings that would increase that number.

Mr. OBERSTAR. So the legislation does pose some present and real burdens for you?

Mr. FELD. Yes; it does. It also poses future problems, because what we do is we try to change our programs, and our acts every year, and every 2 years we try to bring in exotic acts from all over the world. So this importation ban could possibly preclude us from doing certain things. These are temporary imports of maybe 2 years, and then these people go home to another circus.

Mr. OBERSTAR. The movement of your circus across the border to Canada, which you referred to in your testimony, the problems cre-

ated by this requires changes in the law, or changes in regulations by interior?

Mr. THRUN. I would think it probably would require changes in the law.

I am not sure. I might say on the general subject on what can be done by regulation, and what can be done by law, there are areas of stretching the present law to permit exceptions which might in the end lead to the wrong exceptions, instead of adapting the law to the type of regulation you need.

Mr. OBERSTAR. We are very sensitive to that. I think the committee would appreciate whatever legislative language changes you would like to submit, would respond to the specifics of your problem.

You mentioned the variety of State laws on endangered species.

Mr. THRUN. Well, I think in New York State, for example, they had some kind of law, which nobody really knew about, and it was that they threatened to confiscate our animals, and this was a case where you had to have a Federal permit, and that was uncertain, we did not yet have the permit, or a letter saying they could not grant a permit, and so we ironed that out for purposes of the exhibit, but then for awhile they insisted that we had to plead guilty to a violation.

We had to avoid that, because once you plead guilty, you have to list it forever, and it is a reason for denying permits, and so we worked it out on a *nolo contendere* basis.

In Rhode Island, for example, there is a law that would not technically permit entering for any purpose. We think it is inconsistent, we think under section 6 (f) it is illegal, but the thing is, if somebody asserts a thing like that, and it is illegal, so what; you are out of business for the day while you are dealing with it.

Mr. OBERSTAR. You would like something that gives a Federal preemption, so there is uniformity of laws to comply with?

Mr. THRUN. Well, I understand, and I think that—and this is one of the things I want to go into—is the Department of Interior's proposal on State law. If you have a permit, and are able to show it, and that precludes the State, that probably answers our purposes, but that is the kind of thing I want to be sure. I might say in this respect that we have had friendly and helpful meetings with the Department of Interior, and I am not trying to criticize them when I say any of these things.

Mr. OBERSTAR. Anything of that nature, I think the committee would appreciate having something in writing, so we can look at it, and then respond to your particular problems.

Mr. THRUN. Fine.

Mr. OBERSTAR. One the supply for the future of animals for your various acts, is your problem more the one you described, of the elephant, along the reproductive line of the long-reproductive period, and the problem of producing in captivity, is it that, or is it the matter of costs, that it is more costly?

Mr. THRUN. No, I would think some of it is—

Mr. OBERSTAR. The fact of importing, is that more costly?

Mr. THRUN. At the present moment, we could not import these animals for any purpose from abroad, because of our own statute, which says for scientific or propagation purposes.

I am not talking about elephants. I am talking about other endangered species which are parts of existing acts.

It may be if we had the international convention formula, this would be all right.

We would still have argument by the regulatory people, but still we do not think of it as being detrimental. But under the present set-up, we are still precluded.

Mr. OBERSTAR. And those are the animals that are difficult to be reproduced in captivity, is that correct?

Mr. THRUN. In some cases, it is that question, but you might have an animal that is integrated into an act, and trained into the act, so even though you have other tigers, you cannot substitute, for example, tigers which we ourselves produce.

Mr. OBERSTAR. Could you submit for the record the types of animals that are on the endangered species list, that are part of your act?

Mr. THRUN. Yes.

Mr. OBERSTAR. Thank you.

[The following was submitted:]

#### ANIMALS POSSESSED ON ENDANGERED LIST

Ringling Bros. and Barnum & Bailey Circus presently has with its traveling units the following animals which appear on the current U.S. List of Endangered Wildlife published by the Department of the Interior: 43 tigers, and 15 leopards.

By notice of proposed rulemaking published in the Federal Register on September 26, 1975, the Department of the Interior has proposed to expand the U.S. List of Endangered Wildlife to cover a substantial number of additional species, including the Asian elephant. Ringling Bros. and Barnum & Bailey Circus presently owns 50 Asian elephants.

Mr. LEGGETT. Very good, Mr. Oberstar.

Thank you very much.

Gentlemen, your comments will be seriously considered, and we will review this again in some months later.

Mr. THRUN. Thank you very much.

Mr. LEGGETT. Also, gentlemen, your statements are made a part of the record, and the material you are to submit will also be made a part of the record.

We do thank you for your appearance, and your fine testimony.

Mr. FELD. Thank you.

[The prepared statements of Mr. Feld and Mr. Thrun follow:]

STATEMENTS OF KENNETH J. FELD, EXECUTIVE VICE PRESIDENT AND CO-PRODUCER, AND ROBERT THRUN, GENERAL COUNSEL, OF RINGLING BROS.-BARNUM & BAILEY COMBINED SHOWS, INC.

#### STATEMENT OF KENNETH J. FELD

We would like to address our comments today to those questions which have arisen out of our actual experience with the Endangered Species Act of 1973.

To help focus our comments, let me first briefly give some background and describe the nature of the activities of the Ringling Bros. and Barnum & Bailey Circus.

Ringling Bros. and Barnum & Bailey Circus is 105 years old and is the longest running show in the history of show business. We think that we have brought continuity between generations and have become an integral element of the American tradition.

Today we have two traveling units which in the course of the year play in arenas in approximately 80 cities in some 35 states in the United States plus

several cities in Canada. A substantial majority of the arenas are municipally owned, and with few exceptions, we are the biggest attraction to play an arena.

This year we are presenting our special Bicentennial edition which has received formal recognition from the Bicentennial Commission and has been extremely well received around the country.

We employ approximately 300 performers and over 200 support personnel who travel with the units, all of whom are unionized. In addition, when we move into a city, substantial numbers of local personnel are engaged to put on our show.

Since its inception, Ringling Bros. has featured animals as an integral part of its Circus. We were, in fact, one of the earliest zoos and, in the early days, Ringling Bros. probably had the largest display of animals in the United States. Even today with the exception of several zoos in major metropolitan areas, we probably give more people the opportunity to see and appreciate wildlife than any other entity. Many of the cities where we appear do not have zoos or animal parks with the wildlife we feature.

The care and treatment of these animals is of utmost concern to us. We have a full-time veterinarian, Dr. Henderson, who has worked with our circus animals for thirty-five years. He has been successful in developing a breeding program that makes us self-sufficient in tigers. Today, we have some forty-three tigers, thirty-four of which were bred and raised with the Circus.

In addition, we are fortunate to have expert animal trainers and handlers like Gunther Gebel-Williams and Charly Baumann who are masters of their trade and who literally devote their lives to their animals. These are people who love animals and can show the interaction between man and beast in a way that can best display the intelligence and majesty of the animals.

We played to six million people in 1974 and will play to even more this year. Our reception clearly demonstrates the educational, historical and recreational value of our show. We want to be able to continue to bring our unique form of family entertainment featuring tigers, elephants, and other animals to the American public.

It is for this reason that we are concerned with several of the provisions of the Endangered Species Act of 1973.

#### STATEMENT OF ROBERT THRUN

The basic purpose of the 1973 Act is the preservation of endangered and threatened species—an objective we wholly support. This is also the basic purpose of the Convention on International Trade in Endangered Species of Wild Fauna and Flora which deals on a world-wide basis with the problems of species threatened with extinction.

There are two aspects of the Convention which we would like to bring to the Committee's attention. First, Article VII of the Convention recognizes that circuses, zoos and traveling menageries have special problems and, therefore, places them in a special category where, by administrative waiver, the permit requirements do not apply to endangered wildlife which were acquired prior to July 1, 1975 or are captive born. The second aspect is that the entire direction of the Convention is to focus on issues of survival. Even in the most restricted category, i.e. species which are listed on Appendix I to the Convention as threatened with extinction, Article III of the Convention provides for permits for their import and export where it would not be detrimental to the survival of the species.

We believe the recognition of the problem of the traveling show and the continued use of animals that are either pre-owned, captive bred or permitted should be accorded similar treatment and that the 1973 Act, which prevents importation except for very restricted purposes, should be modified to bring it into accord with the international Convention. In this respect, it is also pertinent that Article VIII of the Convention directs the parties to adopt measures to allow permissible imports and exports with a minimum of delay.

During the hearings on the Act there was no indication from either witnesses or Congressional committee members that the activities of circuses were detrimental to the preservation of endangered or threatened species; nor was there any evidence of an intention to alter the normal conduct of circuses. In fact, a contrary conclusion is indicated by the specific congressional finding expressed in Section 2(a) (3) of the Act, that endangered species

are of "esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people".

Since we are a traveling show, our first concern is with Section 9(a)(1)(E) of the Act which makes it unlawful for any person to "deliver, receive, carry, transport or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any [endangered] species".

Use of the phrase, "commercial activity" in this provision of the Act had been interpreted by some to apply to the movement of circuses across state lines and back and forth across the Canadian border in the course of engagements in various cities. This interpretation was not contemplated by the legislative history of the Act, and we do not believe that it is contemplated by the Convention.

The Department of Interior has now recognized in its regulations that the phrase "commercial activity" does not include the normal touring of a circus throughout the country. It has defined the phrase "industry or trade" as used in the definition of "commercial activity" to mean "the actual or intended transfer of wildlife . . . from one person to another person in the pursuit of gain or profit".

Consistently with the Convention, we urge the Committee to take a further step and to endorse or recommend the authorization of waivers and in the case of circuses, zoos and traveling manageries also broaden the grounds for which permits may be granted.

Along the same lines are questions raised by Section 9(a)(1)(A) which makes it unlawful to import or export endangered species from the United States. Almost every year our Circus appears in several cities in Canada. In addition, we are developing plans for another unit which would appear in Canada and perhaps other countries in the course of its annual tour. The circus tradition is strongest in Europe, and much of the best circus talent is found there. This is especially true in the case of animal acts where many circuses built principally around one family may be largely focused on one species of animal. Consequently, in order to get the best acts for presentation here, we have to import them and their animals some of which may be on the endangered list. In most cases, these acts are here on a temporary basis and will return to their own countries with their animals. These activities have no adverse impact on the survival of the species involved.

We recommend that either the Department of Interior adopt regulations or the Act be amended to provide that the movement of our Circus across the Canadian border, for example, and import of acts featuring endangered species for appearance with the Circus in the course of its annual tour not be deemed to be an import or export within the meaning of the Act.

A third set of questions is raised by Section 9(a)(1)(E) which makes it unlawful to sell or offer for sale in interstate or foreign commerce any endangered species. In the past, it has been the practice to exchange, sell or acquire various now endangered species from zoos, animal parks or other legitimate persons in the normal course of the Circus' operations. This practice responded to the legitimate needs of the various parties to balance the numbers and types of animals each party had in a timely and convenient way. Now, because of the uncertainties under the Act, these activities have been interrupted.

This has had a counter-productive effect on the propagation of captive bred animals in excess of those actually needed or used in the circus production. We estimate the cost of breeding and keeping one tiger for one year to be \$5,000. It would obviously be better to permit transfers of captive bred species between circuses and zoos. The future of captive breeding may depend on specialization by different zoos or circuses in different animals.

We, therefore, recommend that section 10(a) of the Act be amended to expand the purposes for which permits may be granted to permit those kinds of legitimate activities in the normal course of the operation of circuses. At present, Section 10(a) authorizes the Secretary of the Interior to grant permits for otherwise prohibited activities which are undertaken for "scientific purposes or to enhance the propagation or survival of the affected species". There are no exceptions for educational and zoological purposes as there were in the Endangered Species Act of 1969.

We suggest that the grounds for granting permits under Section 10(a) be broadened to expressly include educational and zoological purposes and that it be made clear that the normal activities of circuses and zoos fall within



these phrases. This would give the Secretary of the Interior discretion with respect to the granting of permits for those purposes.

One of our principal reasons for concern has to do with the long-time future of the Circus. We believe the greatness of The Greatest Show On Earth depends on its animals—the horses, the tigers, the lions, the camels and particularly the elephants. We have been advised that it is possible that at some time the Indian elephant might be placed on the endangered list. The elephant is a long lived animal, but it is very difficult to breed. The Portland Zoo has had some success; the Milwaukee Zoo has experimented but so far has not been successful. The space and physical restrictions required to do this creates problems that may not be solvable. Consideration is being given to the possibility of artificial insemination. If this is possible, it would certainly be a step toward avoiding the extinction of the species. But the elephant has a gestation period of two years, and in order to try this experiment replacement animals will be required to keep the show going.

Here is one instance where importation from the wild may be the solution to survival of the species. The standards for granting of permits under the Convention would permit this. But those in the Act of 1973 may be too narrow since because of age or other factors the time sequence may or may not permit a showing that the importation is directly for propagative purposes. We think the Department of the Interior should have the authority to grant such permits on the basis that importation is not detrimental to the survival of the species.

In this connection, we note that the Department of Interior has issued regulations to create a special category of captive bred, self-sustaining endangered species which would be deemed to be threatened species, rather than endangered species. Wildlife within this class, subject to the granting of a permit, may be transported in the course of a commercial activity and may be sold in interstate commerce. We think this is a constructive approach. It is consistent with Article VII—the exemption provision—of the Convention.

We believe, however, that the Department's approach should be broadened. It is restricted to a class which already exists within the United States and, therefore, precludes creating any new self-sustaining class within this country. It also does not permit the export or import of any wildlife falling within this category. In this connection, it is not even broad enough to permit the import of endangered species that would otherwise be permitted under the exemptive provisions of Article VII of the Convention.

Since we travel throughout the United States, we are also subject to the laws of each of the states dealing with endangered and threatened wildlife. We have already experienced the problems that can develop under these laws, in addition to complying with the Act. The requirements under these laws vary substantially and in some cases also depart significantly from the Act. The mere existence of administrative or inconsistent requirements, even though illegal, may, especially when accompanied by the sanction of confiscation, give us severe problems. There is not time for litigation or argument when you are trying to move a big traveling show. We are therefore deeply concerned with recommended state legislation and the agreements for cooperation. We have not had an opportunity to review these, and of course they may relate primarily to resident rather than imported species. We may have additional suggestions later in this connection.

We wish to express our appreciation to this Committee for the opportunity to express our comments on the 1973 Act and we would be pleased to respond to any questions which you may have.

Mr. LEGGETT. We have a number of witnesses left. We have a vote taking place. Somebody has to make a plane at 3:30. Is that still possible to make that airplane?

Mr. QUINN. I have to be out of here by 3:30.

Mr. LEGGETT. And you are with Lion Country Safari. We will take you right now.

Mr. SEAL. I also need to be out of here at 3:30.

Mr. LEGGETT. O.K. We will take you both at the same time.

Proceed first, Mr. Quinn.

## STATEMENT OF PAT QUINN, ZOOLOGICAL DIRECTOR, LION COUNTRY SAFARI

Mr. QUINN. I have a written statement, which I have submitted. I will make a few comments and leave.

I am glad to hear you have been to Africa. I have been there several times, and we all know what is happening to wildlife throughout the world, and I think it pretty well relates to the unworkable situation with many of the regulations that we are new coming under.

You are not going to save the Bengal tiger in America, that has a good reproductive record.

You will have to save him in the wild, and if you have been to Africa or Asia, you have seen the devastation of habitat, and I have seen it from month to month going on there. All the regulations in any amount will not have an impact on wild populations of foreign animals unless the countries involved are committed to their salvation. I will give you an example of how unworkable some of the legislation is. At Lion Country Safari, California, which is our home office, we are under USDA, USDI, the California Fish and Game, Orange County Animal Control Board, the SPCA, and other organizations.

We are inundated with legislation fees, permits, and guidelines from many agencies. You know, if all the money spent on staff, permits, and paperwork were channeled to wildlife a lot of species could be saved. I applied for a USDI permit to move six American alligators from our Florida park that were on hold there. As they have made a pretty good comeback in most areas of that State, many end up in People's backyards at the same time we applied to the Florida Fish and Game for a permit.

We got the Florida fish and game permit. It took us several weeks to get the Department of Interior permit. By that time, the fish and game permit had expired. We then reapplied. By the time we got Florida permit returned, the Interior Department permit had expired, so we gave up in total frustration, hoping some day that the alligators may migrate to the west coast.

Thank you for your time.

Mr. LEGGETT. Thank you, Mr. Quinn.

Your statement is stimulating and somewhat informative, and you go get your plane.

Mr. QUINN. Thank you.

[Mr. Quinn's prepared statement follows:]

### STATEMENT OF PAT QUINN ON BEHALF OF LION COUNTRY SAFARI, INC.

Gentlemen, my name is Pat Quinn. I am Zoological Director and Vice President of Lion Country Safari, Inc. We own and operate four wild animal parks in the United States.

In the September 1975 issue of the American Association of Zoological Parks & Aquariums newsletter, 42 tigers, leopards and jaguars were listed as surplus animals. Most of these animals were offered gratis, on loan, or on a "make-offer" status. In the past these animals and many other species were bred by zoological establishments throughout the world and offered for sale.

The ethical obligation of zoological parks to promote breeding of animals in their collection, many of whom are rare or endangered species, may soon end due to excessive legislation and regulations. The frustration, expense and lack of holding facilities for offspring will certainly motivate zoological

establishments throughout the world to actively prevent reproduction of many of the species in their care.

Regulations controlling the movement, sale and shipment of animals bred in captivity are causing zoological park operators to look critically at their breeding programs, and in many instances, may cause them to cease breeding these animals that the legislation was intended to protect.

On March 4, 1974, our California park applied to the Department of Interior for a permit to move six captive born tigers to our own Wild Life Park in Florida. Although these tigers were offspring of captive born tigers we were obliged, due to the wording of present regulations, to request the Department of Interior for permission to move our own tigers to our own facility. At the time the permit was submitted, these animals were young and space requirements and behavior was not a problem. The permit to transfer the tigers from our own park in California to our own park in Florida was not issued until September 12, 1974. During those seven months the tigers had matured and their space requirements and their behavioral activities had changed drastically.

Under the present regulations, Lion Country Safari is considered to be a "commercial" enterprise and as such is subject to permit requirements not imposed upon non-profit zoological establishments. For example, a non-profit zoo could have transferred the same animals to another non-profit zoo without requiring a permit from the Department of Interior to do so. Because we are considered a "commercial" enterprise, we not only had to wait seven months for a permit to be issued, we also had to contend with the resultant behavioral problems caused, by the fact that the young tigers were not approximately 18 months to 2 years old.

In addition, during the seven month waiting period, we lost one tiger. The regulations concerning the movement of these animals were responsible for the death of that tiger. Interior contends that their new regulations relating to captive self-sustaining populations will alleviate this problem. However, due to past experience we have vasectomized our remaining tigers to insure that reproduction of this species will not cause the same problems we experienced with the offspring that we proposed to move to Florida.

Why should federal agencies concern themselves with species that are successfully reproducing in the United States? Regulation of endangered species that have a good reproductive track record is unnecessary and illogical since these animals must be protected and saved in the wild state.

At Lion County Safari in the last two and a half years, we have had 33 cheetah born. At this time we have three pregnant females. What problems will be created by the present regulations when the offspring of these cheetah are to be sold, moved or exchanged?

It is our understanding that cheetahs will not qualify as a captive self-sustaining population under the new Interior Department regulations. We will, therefore, be faced with the same paperwork and redtape to move or transfer any offspring that currently exists.

I submit that the new regulations of the Department of Interior will do nothing or very little to alleviate most of the present problems of zoological parks, and I strongly urge the Congress to take some action to help us out.

Mr. LEGGETT. Our next witness is Dr. Ulysses Seal, Minnesota Zoological Garden, International Species Inventory System.

## **STATEMENT OF ULYSSES SEAL, MINNESOTA ZOOLOGICAL GARDEN, INTERNATIONAL SPECIES INVENTORY SYSTEM**

Dr. SEAL. Mr. Chairman, my name is Ulysses Seal. I am a member of the board of directors, Minnesota Zoological Garden, currently under construction.

Mr. LEGGETT. I might mention your statement will also appear in the record.

Dr. SEAL. Thank you. More importantly for the purposes of the presentation, I was codeveloper along with my colleague, Dale Makey, of a program called the International Species Inventory System, currently referred to as ISIS.

I am not a zoo professional. I am primarily a scientist who has a fundamental interest in the biology of reproduction of a number of captive wild species. I have been working with zoos on problems of this sort for a number of years.

It has been my privilege during the past 2 years to participate with the national zoo organization—AAZPA—and the national 300 veterinarian organization—AAZV—in developing this project which has provided the data that I think document very strongly the fact that zoos have indeed over the past decade developed a number of captive self-sustaining populations of wild mammal species. The data and presentations support this in some detail.

Essentially, what happened 2 years ago, was that a proposal was made to the AAZPA to formulate census and vital statistics data system for captive wild animals, with a special emphasis on the endangered species.

During the past 2 years, this has been done, and 180 zoos in North America, both in the United States and Canada, have agreed to participate.

We currently have received data on over 24,000 mammals. We estimate that there are approximately 36,000 foreign wild mammals held in captivity in North America.

We anticipate by the end of this year, or the first of next year, that we will have on record over 80 percent of these animals, and these records will include not only their age, their sex, and their distribution in the country, but it will also include their pedigree, that is the identity of parents and their breeding history. We also will have accurate birth data and accurate death statistics. This program initiated by zoos, supported by zoos, by two private foundations, and by the USDI, represents an effort by the zoo profession, as well as interested organizations, private organizations, and Government agencies, to address itself to the problem of captive self-sustaining species, and the problem of long-term management of species in captivity.

Mr. LEGGETT. The figure you give us is how many?

Dr. SEAL. 36,000.

Mr. LEGGETT. That is the total?

Dr. SEAL. Care in definition needs to be taken here. It does not include captive native species such as exhibited at game farms.

This would be the population held in zoos as listed in the AAZPA zoo directory. These are public and private institutions, usually operating for an exhibit; so yes, 35,000 mammals. Endangered species are only a fraction of this total—about 5,200 mammals.

Mr. LEGGETT. It is not as many as you might think.

Dr. SEAL. Now, the accomplishments, I think they are best reflected in the last two tables where we list five endangered species encompassing about 3,000 animals or 60 percent of the endangered mammals held in zoos. In the case of the jaguar, 375 are being held, and it ranges up to 770 in the case of the tiger, and in the case of births, for the ringtail lemur, it is 60 births and no deaths.

In the last of the table summaries, there is another very important statistic, that is for these five species, the vast majority of the adults currently held in captivity were captive born, and thus the drain on the wild population has been very small.

The highest number of wild-born was 19 percent and zoo-born was 76 percent for the no-luck lemur. The wild-born animals were less than 10 percent in the other species and in the case of the tigers as few as 2 percent were wild-born, so we feel there is strong evidence that these species have been developed into captive self-sustaining populations. The time period involved in developing these populations has been longer than the duration of either the Endangered Species Acts. This reflects the responsible actions of the identified zoos and zoological institutions, and this shows their efforts to gather the statistics.

These zoo people have independently and productively undertaken this action. If one examines the overall record for all animals held in captivity in these zoos, approximately 16 percent of the animals living at the end of 1974 were actually born during that year. A maximum of 9 percent of the total animals died during that year, and this is an upper limit for deaths.

Finally, the status of the big cats has reached the point where the productivity is far in excess of the capacity of the zoos involved in the production, so that because of not only the large excess of production and the feat, to maintain viable gene pools, it will be necessary to produce an excess, and this is an important concept; it is not possible to simply maintain a simple self-replacing level population.

You have to produce an excess to counterbalance not only the losses, but there is also a need to select a population to be maintained on a long-term basis. This means there will be of necessity a surplus which will require disposal, and thus means to handle this surplus need to be developed.

As a part of this problem, during the past year, we worked with 13 zoos in this country, in the development of reversible contraceptive programs, particularly for the big cat. The problem has become so acute, it has become necessary to develop ways of inhibiting breeding, and by the very nature of the big cats, it is not easy in a management sense to work out techniques for simple separation.

It is not desirable from the point of view of behavior to have separation for some of these animals, and in any case, it is also not desirable to undertake steps that are irrevokable, so we have developed successful techniques for reversible contraception, and employed these. This provides another indication of zoo responsibility, while attempting to work out the acute problem of management of these populations.

I thank you, sir.

Mr. OBERSTAR. It is a very enlightening statement I must say, Doctor.

I was fascinated by the information you have here. Certainly it could be very valuable to the committee in our consideration of this legislation, the problems it has generated.

Unfortunately, I missed the first part of your presentation, going over to the floor to vote.

I am not clear just what way the legislation adversely affects you, and what problems it creates for you, as it now stands.

Dr. SEAL. I think the effects of the legislation will be addressed by other members of the group speaking for the zoos.

Essentially, I think what this does is identify for you that zoos have been productive and responsible in the development of captive populations, and by the very nature of the history, it predated both the 1969 and 1973 legislation. This response, the generation of substantial surpluses in a number of these species is going to require techniques for handling, and to handle them in ways that I think the zoos had best address.

That is, there will be the surplus, that cannot simply be managed by trading between a very small pool of zoos. There will have to be a much larger pool of potential users or exhibitors than those that are probably going to be judged qualified under the current legislation.

Mr. OBERSTAR. I suppose it would be fair to ask, why can't you send them back to their natural habitat?

Dr. SEAL. I would be delighted to respond. I could talk indefinitely, and I suspect there are a lot of people who wish I would not.

The basic problem first is to have the habitat. In general, this is still a major problem. The second aspect then is that the species maintained in captivity has to be maintained in conditions suitable to return it to its native habitat.

This also requires a special approach, but I think the simplest answer is, in general, the habitat is not available to return them to.

There have been a number of species that the zoos have, and are maintaining, that simply do not exist in the wild anymore, but there is no feasible means at the present time to return them to the native habitat.

Mr. OBERSTAR. Is there a natural, a biological, or what really is the word, problem in returning the animal to its natural habitat?

I have reference to the problem of an animal growing up in captivity first, and then having to learn the techniques of food gathering; is that the kind of thing you are referring to, or is there some other problem?

Dr. SEAL. I will give you a statistic. The efforts to implant species, or transplant or put them into new habitats, has had an 80-percent-failure rate for a diversity of reasons. It can be done, so that if the decision is made to reimplant or restock a wild habitat, it is possible through the necessary preparation perhaps to achieve it, but you must anticipate a high-failure rate.

Mr. OBERSTAR. Have you discussed these problems with the Fish and Wildlife Service, or have they sought out your advice?

Dr. SEAL. We have had extended discussions with the Fish and Wildlife Service, and the Office of Endangered Species, and they have contributed to the development of this program, they feel the information obtained will help in some of their long-term problems.

I could add one additional point. I think the zoos have two major contributions to make. One is the educational function which has been dealt with very well by many people. The second is that it provides a place for us to study a large number of species, in a very short period of time. We could with this information go back to very limited habitats, and achieve, far more rapidly, satisfactory conditions for management in the wild.

Ultimately, it is my belief the world is currently now a series of metropolitan areas with zoos.

The whole world is fundamentally a zoo, from the point of management of wildlife.

Mr. LEGGETT. The animals on the outside world are inside?

Dr. SEAL. There is no question. The zoos in this country will serve as a model for problems that will be faced by us well within our lifetime in the next two decades.

The Bengal tiger in India currently has a population of 1,200 animals. Five preserves have been provided for it. No one of those preserves is large enough to sustain more than 70 animals. For that species to still exist as a species, it will mean they will have to consider how they will move animals between those preserves to maintain the characteristics of the Bengal tiger.

It is almost the same problem, as though all of India had tigers, even though they call them wildlife preserves, and the same thing has happened to other species.

Mr. OBERSTAR. You mean that despite the other problems we discussed earlier, even with the possibility of bringing animals back, there would not be room enough for them in their natural habitat?

Dr. SEAL. That is true for a large number of species of concern.

Mr. OBERSTAR. I am very impressed with the enormous volume of information you have provided here.

How have you gathered all this information?

Dr. SEAL. It represents the tip of the iceberg, a portion of which I have with me in stacks this high.

What I have attempted to do is condense for you what amounts to data on 20,000 animals, it amounts to 8 years of experience in studies in zoos, in regard to my own study programs.

You asked a simple question, let me give you a simple answer.

We put together a program 2 years ago in collaboration with the zoo directors, and they responded to the need as they saw it; 178 zoos have joined the program. Each and every zoo that is participating fills out a form on each of its animals, submits this to us, we edit it, check it for errors, put it in the computer, and then produce a report which I cannot carry with me, since the first one is 1,000 pages long, this thick. It is all here on microfisch, we have records, we anticipate having records of most of the animals held in captivity in North America in major zoological institutions within the next year.

We have 24,000 now.

Mr. OBERSTAR. Does the Fish and Wildlife Service regularly seek out your help and guidance?

Dr. SEAL. We hold frequent discussions, and our relationships are very frequent, and they have been very helpful in the development of this program.

Again, perhaps you missed the early part of this, the funding for the program has come from donations, or contributions by the national zoo directors, and two private foundations, and USDI.

They—(USDI)—have supplied a total of 30,000 for the developmental phases of this program, so there has been a support from the industry, and from private people with great interest, and from the Federal Agency in something that I know is unique in this world.

Mr. OBERSTAR. You make your information available to the Fish and Wildlife Service?

Dr. SEAL. The information is available to all participants and zoos; 128 zoos have received a copy of this microfiche. Anyone of them could have written a report from this material. USDI also has three copies of it.

Mr. OBERSTAR. One question though, with regard to the surplus of animals, what happens with the surplus, if you cannot ship them back to the wilds, do you just exterminate them?

Dr. SEAL. That is too direct a question, indeed the question of surplus is going to have to be addressed.

The zoos are beginning now to address it, and then I think they will have to come back to you, and tell you what needs to be done.

There is going to be produced inevitably in any species that is maintained as a captive self-sustaining population, on an annual basis, approximately twice the number of offspring that can be maintained in that population. This means then that they will have to be distributed by some route that is suitable and socially acceptable, but the requirements for maintenance must be considered carefully.

Mr. OBERSTAR. You have to have some kind of replenishment from the wild, or you have the problem of inbreeding.

Dr. SEAL. I have produced an attachment, a discussion of gene pool conservation.

I will be glad to submit that. We have attempted in the past year to develop a theory for gene pool management, as would be accomplished in the captive population.

We can point out strategies that would be required in terms of maximizing the maintenance of the genetic diversity of a captive population.

With a program for proper breeding, it is possible to maintain at least 90 percent of the characteristics of a given population, over 10 to 20 generations.

With brother-sister and back-cross breeding, you can lose 75 percent of this diversity in three generations, so it requires an active breeding policy and management program. The zoos have sponsored, and are currently sponsoring—I did not make this a part of this testimony—the development of a program on which we are currently working with them.

It is not a simple question.

Mr. LEGGETT. Very good, Dr. Seal.

That is very, very helpful to the committee. As I see your statistical information, you generally show that the large bulk of our animals are bred and not caught.

Dr. SEAL. That is correct, sir.

Mr. LEGGETT. And that your survival rate is very good, and you did not precisely answer the statement of Mr. Oberstar, are we terminating a large number of animals, that we cannot find places for them?

Dr. SEAL. Yes, in the sense that because of the difficulties a number of zoos experience, basically in offspring, the problem will be in the difficulties of distributing these offspring, and the question of who is defined as qualified and responsible.

Mr. LEGGETT. Are you blaming that on Federal legislation?

Dr. SEAL. I am not blaming it on anyone. I am saying that the zoos currently involved have attributed this to the difficulty of



getting permits in a suitable time frame to sell these animals, and this appears here to involve Federal legislation, and as a result, approximately 100 females I know of have been taken out of production, which means next year we will have 300 fewer cats than we could have had.

Mr. LEGGETT. Do the zoos get rid of animals, so that the survivors will be more valuable?

Dr. SEAL. There is an initial tendency to do this, when a given zoo, or small group solve a problem that is insoluble, but the operation, I feel, of zoos has been very much in the tradition fair open market. This competition is keen, we have seen prices go from \$800 in certain classes of tigers, when they were available initially in the wild, to \$6,000, when the supply was cut off, and then the price plummeted, as people are successful in breeding, down to a thousand dollars. So you see, the prices do change, but it has not been possible for any group of zoos to maintain a monopoly on a wild species, because the only way you can do it is to castrate everything you send out, and nobody will buy anything castrated, and if one zoo can breed successfully another can also.

Mr. LEGGETT. Your testimony is very helpful, and I hope you will continue to provide your advice to the committee.

Dr. SEAL. It has been my pleasure.

Mr. LEGGETT. Thank you very much.

[The prepared statement of Dr. Seal follows:]

STATEMENT OF U. S. SEAL, PH. D., ON BEHALF OF THE AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS

STATUS OF WILD MAMMALS HELD IN AMERICAN ZOOS

Mr. Chairman and members of the committee; my name is U. S. Seal, Ph. D. I am a Professor, Department of Biochemistry, University of Minnesota, Minneapolis, Minnesota. I am also Board Member of the Minnesota Zoological Garden and Co-Developer of International Species Inventory Systems. I appreciate your invitation to me to appear here and testify today.

1. INTRODUCTION

Noah was instructed to construct an ark and bring aboard representatives of all the creatures of the earth, the skies, and the waters to provide a nucleus of survival during the period of the floods. At the conclusion of the floods, the instructions received were "Be fruitful, and multiply, and replenish the earth." The ark was stocked with at least two, and in many cases seven, pairs of species brought aboard. This early wisdom in collecting a significant gene pool reflects, I am sure, the animal husbandry skills of these peoples at that time.

Modern day zoos are faced with the responsibility of developing self-sustaining populations of captive wild species and, in selected instances, of providing the only reservoir for species on the verge of extinction or extinct in the wild. To accomplish these goals it has been necessary to develop policies for management of the gene pools over multiple generations, to collect data and share it, to continue work on development of methods for enhancement of reproduction, and finally to develop methods for managing problems of surplus production.

Collection of census and vital statistics data is being accomplished by the ISIS committee of the American Association of Zoological Parks and Aquariums. Development of gene pool management concepts for establishment of a breeding policy and breeding management philosophy are currently underway. Enhancement of reproduction is being accomplished by development of innovative management techniques, behavioral and field studies, and in selected cases through the use of artificial insemination and hormonal manipulation. The problem of managing surplus has become acute with some species, including several of the U.S. list of endangered foreign mammals.

## 2. A BRIEF HISTORY OF ISIS

The first American Association of Zoological Parks and Aquariums (AAZPA) International Species Inventory System (ISIS) mammalian species distribution summary (our first national survey) was prepared May 5, 1975. It records data on 12,086 living specimens based on reports from 92 zoos, of whom 44 have completed their entire inventory reports, Tables 1-4. The report summarizes events occurring during the year 1974, thus, any births or deaths occurring during 1975 are not included. The report contains data on 12,086 living specimens of mammals, of which 1,944 were born in 1974, and 287 deaths were recorded. The 287 deaths represent only a proportion of the deaths occurring in 1974 since we did not begin collecting data until June 1974. Our instructions to the zoos requested they begin with their currently living collection and then report deaths and other changes as they occurred from their beginning date. This means that all animals born in 1974 and still living in the zoo would be recorded, whereas only about one-fourth of the year's deaths are on record. We, therefore, estimate that the actual number of deaths was around 1,144. More accurate data will be available at the end of 1975.

Thus, 16% of the 12,086 living specimens on record were born during 1974, and approximately 9% of a total 13,200 died during 1974. The total number of acquisitions during this period was 3,517 and includes the 1,944 births, 784 purchases, 165 trades, 414 donations, and 155 loans. During the same period 760 specimens were released or removed from the individual collections. This included the 287 deaths mentioned above and 249 sales, 74 trades and 88 loans. At the time of reporting, 157 autopsies were recorded for the 287 deaths, yielding an autopsy rate of 55%. This rate would increase with later autopsy reports as these become available, but even at this percentage is higher than the nation-wide rate of human autopsies.

Although it will be another six months before complete data are available to allow precise estimates of overall birth rates and death rates, it is already clear that the number of animals being born in zoo collections considerably exceeds the current death rate. This is the result of many successful breeding programs which are producing sufficient numbers of some species with the result that no additional space is available in qualified zoo collections for these animals. It also reflects the fact that the death rate for most species in captivity is considerably lower than that observed in the wild since zoo collections offer continuous adequate nutrition, treatment for disease and no predator pressure. Rather, a major consideration for future zoo breeding management policy will be carefully regulated breeding to maintain adequate genetic heterogeneity in the gene pools to be maintained in captivity primarily from captive stock. The data base provided by the ISIS program of the AAZPA will make a significant contribution to the achievement of these breeding policy objectives.

## 3. THE JAGUAR AS AN EXAMPLE

An example of the kind of information available from zoos may be illustrated with our available data on an endangered species, the jaguar, *Panthera onca*. This species is currently considered to contain eight subspecies of which three are currently identified as being held in captivity. The following data are the actual numbers based upon the animals reported, that is 12,086. It is estimated that this represents one-third of the animals held in collections in North America. Since the sample size is so large and there are a wide spread of zoo exhibitors represented, we feel that a reasonable estimate of the actual numbers in each of the categories to be discussed can be obtained simply by multiplying by three. Thus, the total number of jaguars listed are 125, of which 111 are unidentified with respect to subspecies classification, and 24 are placed in either *Panthera onca centralis* or *Panthera onca onca*, or *Panthera onca arizonensis*. These 125 animals are held in 42 zoos. The sexes are as follows: 66 females, 58 males, and 1 of unknown sex. Eleven of the zoos held animals of one sex only, for a total of 13, yielding 31 zoos with 114 animals in a potentially paired situation. During the time of record, 35 baby jaguars were born and 30 currently remain in these collections. There appear then to have been 13 litters born in 12 zoos, with two deaths occurring during the first 60 days. Thus, the 114 animals minus 30 born during the year yields 84 animals that might potentially be breeders. However, an additional 13 are less than two years old, yielding 71 animals of approximately breeding age. A survey of the data indicated 30 zoos with pairs of animals older than two

years that might potentially produce young. Twenty-three of these zoos had pairs between the age of two and ten years, which produced a total of nine litters in eight of the zoos. Seven of the zoos had pairs greater than 10 years of age, which produced three litters. Thus, eleven out of 30 zoos produced a total of 12 litters for a total of 34 animals born. If one multiplies these numbers by three to arrive at an estimate of the total captive jaguar population in North America, the data indicate the presence of 375 animals and the probability that about 105 births occurred during the year 1974. The effective breeding population would be in the vicinity of 210 animals, with adequate recruitment to maintain this population and produce a surplus.

#### 4. CAPTIVE SELF-SUSTAINING POPULATIONS

A similar analysis of four other endangered species, ringtail lemur (*Lemur catta*), black lemur (*Lemur macao*), leopard (*Panthera pardus*), and tiger (*Panthera tigris*) has yielded similar results, Table 5. The success of American zoos in developing self-sustaining captive populations of species can be demonstrated with data from five species on the U.S. list of endangered foreign mammals. These include the ringtail lemur, black lemur, jaguar, leopard, and tiger as summarized in Tables 5 and 6. The numbers of each of these species currently held in captivity ranges between 375 to 770 animals. Various estimates of the numbers required to maintain a viable population in captivity range between 100 and 300. Each of these species clearly exceeds these requirements. They are held in a large number of zoos ranging between 25 and 150, thus insuring protection against catastrophic loss due to disease or some other accident. Approximately 80 to 90% of the zoos holding these species hold breeding groups. There is a satisfactory distribution of sexes in the groups with a slightly greater proportion of females than males in most cases. The firmest indication of success of maintenance of these species is gained from comparisons of birth rates and death rates. The excess of births over deaths ranges from two to five fold in these species. The numbers of births are so large in each of the species that we are clearly able to enter into an exponential growth curve in numbers of specimens. The numbers of Siberian tigers held in captivity are greater than the numbers estimated presently to be existent in the wild. Indeed, currently approximately 200 animals are estimated to exist in the wild and during the year 1974 there were 130 births of Siberian tigers in captivity in American zoos. Further evidence of the security of the captive born populations is obtained from evidence that the majority of the animals currently held in captivity were born in captivity, thus second and third generation offspring have been produced with all of these species. The numbers of captive born for these five species range between 69 and 92%. The very success of these programs has generated the need to allow movement of these animals between zoos as readily as possible and to develop techniques for control of surplus breeding. There is, thus, an urgent need to develop the means of moving these animals more readily between qualified zoos in this country.

#### 5. CONTROL OF REPRODUCTION

The control of reproduction would appear almost an inappropriate topic for discussion in light of the urgent need to define mechanisms for conservation of the many species on endangered and threatened lists. However, the very success of breeding programs has generated problems of animal surplus and disposal which must be met. Also, the establishment of a regulated breeding policy requires selective removal of animals from the active breeding population. This, however, may need to be done without removal of the specimen from the display, exhibit, or maintenance group. Also, undesirable genetic stock has to be removed from active breeding. The problem of a large available surplus has already occurred in captive populations of lions, tigers, leopards, and jaguars. Current programs of management and maintenance of these animals in groups with ample opportunities for breeding and their successful management has resulted in the production of far more young animals than can be carried in the facilities and has over-saturated available zoo facilities.

The suppression of reproduction can be accomplished by management techniques such as separation at appropriate times of the breeding cycle; by surgical techniques, most commonly castration or vasectomy of the male; and by use of contraceptives either mechanical or hormonal. We have assisted in the development of a hormonal program for contraception on the basis of the need

for reversible techniques, techniques which will minimize behavioral effects upon the animals, techniques which can be applied to males and to females, and techniques utilizing methods of administration requiring a minimum number of administrations of the compound to individual animals.

We have received requests from 13 zoos to participate in the contraception program for the big cats. Most of the zoos with successful breeding programs are now unable to dispose of their surplus and cannot responsibly allow further reproduction until the problems of distribution are resolved. The use of reversible contraception is a responsible approach to the problem.

The information summarized in this presentation documents the successful cooperative efforts of American zoos to develop and share census and vital statistics information on wild species in their care. The resulting data have demonstrated the successful establishment of self-sustaining captive populations of many species including endangered species. Indeed, with leopards, tigers, jaguars, and lions it has become necessary to control reproduction in order to avoid an unmanageable excess. These events represent a nearly unanimous sustained cooperative effort by zoological exhibit institutions to make a unique contribution to the conservation of the world's wildlife.

TABLE 1A.—SUMMARY BY MAMMALIAN ORDERS, 1974

|                     | Specimens | Births | Recorded deaths | Estimated deaths | Sum of acquisitions | Sum of releases | Autopsies |
|---------------------|-----------|--------|-----------------|------------------|---------------------|-----------------|-----------|
| Monotremata.....    | 16        | 0      | 1               | -----            | 2                   | 1               | 0         |
| Marsupialia.....    | 417       | 73     | 12              | (48)             | 170                 | 16              | 6         |
| Insectivora.....    | 83        | 16     | 5               | (20)             | 30                  | 7               | 1         |
| Chiroptera.....     | 115       | 13     | 4               | (16)             | 25                  | 11              | 3         |
| Primates.....       | 3,006     | 277    | 56              | (224)            | 617                 | 127             | 42        |
| Edentata.....       | 188       | 4      | 1               | (4)              | 36                  | 4               | 0         |
| Dermoptera.....     | 0         | -----  | -----           | -----            | -----               | -----           | -----     |
| Pholidata.....      | 3         | 0      | 0               | -----            | 0                   | 0               | 0         |
| Lagomorpha.....     | 16        | 8      | 0               | -----            | 11                  | 0               | 0         |
| Rodentia.....       | 754       | 132    | 27              | (108)            | 352                 | 33              | 13        |
| Cetacea.....        | 2         | 0      | 0               | -----            | 0                   | 0               | 0         |
| Carnivora.....      | 2,888     | 478    | 48              | (192)            | 934                 | 203             | 25        |
| Pinnipedia.....     | 142       | 1      | 4               | (16)             | 29                  | 5               | 3         |
| Tubulidentata.....  | 5         | 0      | 0               | -----            | 3                   | 0               | 0         |
| Proboscidea.....    | 107       | 0      | 1               | (4)              | 15                  | 1               | 1         |
| Hyracoidea.....     | 71        | 11     | 3               | (12)             | 27                  | 3               | 3         |
| Sirenia.....        | 0         | -----  | -----           | -----            | -----               | -----           | -----     |
| Perissodactyla..... | 432       | 31     | 5               | (20)             | 76                  | 25              | 1         |
| Artiodactyla.....   | 3,841     | 900    | 119             | (476)            | 1,190               | 323             | 55        |
|                     | 12,086    | 1,944  | 286             | (1,144)          | -----               | 759             | 153       |

TABLE 1B.—SUMMARY BY MAMMALIAN ORDERS, 1974

|                     | Percent of mammals | Births as percent of sum | Births as percent of acquisitions | Deaths as percent of sum | Ratio of births/deaths |
|---------------------|--------------------|--------------------------|-----------------------------------|--------------------------|------------------------|
| Monotremata.....    | 1                  | 0                        | 0                                 | -----                    | -----                  |
| Marsupialia.....    | 3.5                | 17.5                     | 42.9                              | 11.5                     | 1.52                   |
| Insectivora.....    | .7                 | 19.3                     | 53.3                              | 24.1                     | .8                     |
| Chiroptera.....     | 1.0                | 11.3                     | 52.0                              | 13.9                     | .81                    |
| Primates.....       | 24.9               | 9.2                      | 44.9                              | 7.5                      | 1.23                   |
| Edentata.....       | 1.6                | 2.1                      | 11.1                              | 2.1                      | 1.00                   |
| Dermoptera.....     | -----              | -----                    | -----                             | -----                    | -----                  |
| Pholidata.....      | .02                | 0                        | 0                                 | -----                    | -----                  |
| Lagomorpha.....     | 1                  | 50                       | 72.7                              | -----                    | -----                  |
| Rodentia.....       | 6.2                | 17.5                     | 37.5                              | 14.3                     | 1.22                   |
| Cetacea.....        | -----              | 0                        | 0                                 | -----                    | -----                  |
| Carnivora.....      | 23.9               | 16.5                     | 51.2                              | 6.6                      | 2.50                   |
| Pinnipedia.....     | 1.2                | .7                       | 3.4                               | 11.3                     | .06                    |
| Tubulidentata.....  | .04                | 0                        | 0                                 | -----                    | -----                  |
| Proboscidea.....    | .9                 | 0                        | 0                                 | 3.7                      | 0                      |
| Hyracoidea.....     | .6                 | 15.5                     | 40.7                              | 16.9                     | .92                    |
| Sirenia.....        | -----              | -----                    | -----                             | -----                    | -----                  |
| Perissodactyla..... | 3.6                | 7.2                      | 40.8                              | 4.6                      | 1.57                   |
| Artiodactyla.....   | 31.8               | 23.4                     | 75.6                              | 12.4                     | 1.89                   |

TABLE 2A.—SUMMARY OF PRIMATE FAMILIES, 1974

|                      | Specimens | Births | Recorded deaths | Estimated deaths | Sum of acquisitions | Sum of releases | Autopsies |
|----------------------|-----------|--------|-----------------|------------------|---------------------|-----------------|-----------|
| Lemuridae.....       | 334       | 55     | 2               | (8)              | 62                  | 4               | 2         |
| Indridae.....        | 7         | 2      | 0               | (0)              | 2                   | 0               | 0         |
| Daubentonidae.....   | 3         | 1      | 0               | (0)              | 1                   | 0               | 0         |
| Lorisidae.....       | 204       | 21     | 3               | (12)             | 51                  | 8               | 0         |
| Tarsiidae.....       | 5         | 0      | 0               | (0)              | 2                   | 0               | 0         |
| Cebidae.....         | 644       | 37     | 10              | (40)             | 154                 | 14              | 10        |
| Callithrichidae..... | 192       | 47     | 8               | (32)             | 72                  | 13.             | 6         |
| Cercopithecidae..... | 1, 119    | 93     | 24              | (96)             | 195                 | 65              | 19        |
| Pongidae.....        | 493       | 21     | 9               | (36)             | 78                  | 23              | 5         |
| Hominidae.....       | 5         |        |                 |                  |                     |                 |           |
|                      | 3, 006    | 277    | 56              | (224)            | 617                 | 127             | 42        |

TABLE 2B.—SUMMARY OF PRIMATE FAMILIES, 1974

|                      | Percent of primates | Births as percent of sum | Births as percent of acquisitions | Deaths as percent of sum | Ratio of births/deaths |
|----------------------|---------------------|--------------------------|-----------------------------------|--------------------------|------------------------|
| Lemuridae.....       | 11. 1               | 16. 5                    | 88. 7                             | 2. 4                     | 6. 88                  |
| Indridae.....        | . 2                 | 28. 6                    | 100. 0                            | 0                        | 0                      |
| Daubentonidae.....   | . 1                 | 33. 3                    | 100. 0                            | 0                        | 0                      |
| Lorisidae.....       | 6. 8                | 10. 3                    | 41. 2                             | 5. 9                     | 1. 75                  |
| Tarsiidae.....       | . 2                 | 0                        | 0                                 | 0                        | 0                      |
| Cebidae.....         | 21. 4               | 5. 7                     | 24. 0                             | 6. 2                     | . 93                   |
| Callithrichidae..... | 6. 4                | 24. 5                    | 65. 3                             | 16. 7                    | 1. 47                  |
| Cercopithecidae..... | 37. 2               | 8. 3                     | 47. 7                             | 8. 6                     | . 97                   |
| Pongidae.....        | 16. 4               | 4. 3                     | 26. 9                             | 7. 3                     | . 58                   |
| Hominidae.....       | . 2                 |                          |                                   |                          |                        |

TABLE 3A.—SUMMARY OF CARNIVORE FAMILIES, 1974

|                  | Specimens | Births | Recorded deaths | Estimated deaths | Sum of acquisitions | Sum of releases | Autopsies |
|------------------|-----------|--------|-----------------|------------------|---------------------|-----------------|-----------|
| Canidae.....     | 299       | 47     | 3               | (12)             | 95                  | 22              | 1         |
| Ursidae.....     | 395       | 27     | 9               | (36)             | 72                  | 26              | 6         |
| Procyonidae..... | 230       | 14     | 1               | (4)              | 65                  | 9               | 1         |
| Mustelidae.....  | 257       | 8      | 5               | (20)             | 94                  | 12              | 3         |
| Viverridae.....  | 117       | 7      | 2               | (8)              | 38                  | 5               | 0         |
| Hyaenidae.....   | 44        | 6      | 1               | (4)              | 9                   | 2               | 0         |
| Felidae.....     | 1, 546    | 369    | 27              | (108)            | 561                 | 127             | 14        |
|                  | 2, 888    | 478    | 48              | (192)            | 934                 | 203             | 25        |

TABLE 3B.—SUMMARY OF CARNIVORE FAMILIES, 1974

|                  | Percent of carnivores | Births as percent of sum | Births as percent of acquisitions | Deaths as percent of sum | Ratio of births/deaths |
|------------------|-----------------------|--------------------------|-----------------------------------|--------------------------|------------------------|
| Canidae.....     | 10. 4                 | 15. 7                    | 49. 5                             | 4. 0                     | 3. 92                  |
| Ursidae.....     | 13. 7                 | 6. 8                     | 37. 5                             | 9. 1                     | . 75                   |
| Procyonidae..... | 8. 0                  | 6. 1                     | 21. 5                             | 1. 7                     | 3. 5                   |
| Mustelidae.....  | 8. 9                  | 3. 1                     | 8. 5                              | 7. 8                     | . 4                    |
| Viverridae.....  | 4. 1                  | 6. 0                     | 18. 4                             | 6. 8                     | . 88                   |
| Hyaenidae.....   | 1. 5                  | 13. 6                    | 66. 7                             | 9. 1                     | 1. 5                   |
| Felidae.....     | 53. 5                 | 23. 9                    | 65. 8                             | 7. 0                     | 3. 42                  |

TABLE 4A.—SUMMARY OF ARTIODACTYLA FAMILIES, 1974

|                     | Specimens | Births | Recorded Deaths | Estimated Deaths | Sum of Acquisitions | Sum of Releases | Autopsies |
|---------------------|-----------|--------|-----------------|------------------|---------------------|-----------------|-----------|
| Suidae.....         | 11        | 4      | 0               | (0)              | 4                   | 0               | 0         |
| Tayassuidae.....    | 44        | 10     | 1               | (4)              | 11                  | 3               | 0         |
| Hippopotamidae..... | 89        | 13     | 1               | (4)              | 16                  | 4               | 0         |
| Camelidae.....      | 324       | 55     | 5               | (20)             | 85                  | 19              | 5         |
| Tragulidae.....     | 3         |        |                 |                  |                     |                 |           |
| Cervidae.....       | 1,043     | 257    | 43              | (172)            | 306                 | 103             | 16        |
| Giraffidae.....     | 105       | 15     | 2               | (8)              | 29                  | 3               | 2         |
| Antilocapridae..... | 37        | 10     | 5               | (20)             | 19                  | 6               | 0         |
| Bovidae.....        | 2,185     | 536    | 62              | (248)            | 720                 | 185             | 28        |
|                     | 3,841     | 900    | 119             | (476)            | 1,190               | 323             | 55        |

TABLE 4B.—SUMMARY OF ARTIODACTYLA FAMILIES, 1974

|                     | Percent of artiodactyla | Births as percent of sum | Births as percent of acquisitions | Deaths as percent of sum | Ratio of births/deaths |
|---------------------|-------------------------|--------------------------|-----------------------------------|--------------------------|------------------------|
| Suidae.....         | .3                      | 36.4                     | 100                               | 0                        | 0                      |
| Tayassuidae.....    | 1.1                     | 22.7                     | 90.9                              | 9.1                      | .1                     |
| Hippopotamidae..... | 2.3                     | 14.6                     | 81.3                              | 4.5                      | 3.3                    |
| Camelidae.....      | 8.4                     | 17.0                     | 64.7                              | 6.2                      | 2.8                    |
| Tragulidae.....     | .1                      |                          |                                   |                          |                        |
| Cervidae.....       | 27.2                    | 24.6                     | 84.0                              | 16.5                     | 1.5                    |
| Giraffidae.....     | 2.7                     | 14.3                     | 51.7                              | 7.6                      | 1.9                    |
| Antilocapridae..... | 1.0                     | 27.0                     | 52.6                              | 54.1                     | .5                     |
| Bovidae.....        | 56.9                    | 24.5                     | 74.4                              | 11.4                     | 2.2                    |

STATUS IN AMERICAN ZOOS OF FIVE ENDANGERED SPECIES<sup>1</sup>

| Species                                    | Estimates <sup>2</sup>             |                   |               |             |             |
|--|------------------------------------|-------------------|---------------|-------------|-------------|
|  | Number of zoos holding the species | Number of animals | Sex ratio ♂/♀ | 1974 births | 1974 deaths |
| Ringtail lemur ( <i>Lemur catta</i> )..... | 67                                 | 422               | 1/1.4         | 60          | 0           |
| Black lemur ( <i>Lemur macaco</i> ).....   | 25                                 | 382               | 1/1.1         | 60          | 20          |
| Jaguar ( <i>Panthera onca</i> ).....       | 126                                | 375               | 1/1.0         | 105         | 24          |
| Leopard ( <i>Panthera pardus</i> ).....    | 137                                | 580               | 1/1.0         | 135         | 70          |
| Tiger ( <i>Panthera tigris</i> ).....      | 150                                | 770               | 1/1.3         | 260         | 50          |

<sup>1</sup> As listed in the U.S. List of Endangered Foreign Mammals, Federal Register, Vol. 35, No. 233, Wednesday, Dec. 2, 1970.

<sup>2</sup> These estimates are based upon our data collected from 40 percent of American zoos as of May 5, 1975. The actual numbers were multiplied by 2.5 to obtain the numbers presented in this table.

SOURCES OF FIVE ENDANGERED SPECIES HELD IN AMERICAN ZOO COLLECTIONS

| Species                                    | Sample size checked N | Wild-born percent | Zoo-born percent | Uncertain percent |
|--|-----------------------|-------------------|------------------|-------------------|
| Ringtail lemur ( <i>Lemur catta</i> )..... | 115                   | 8                 | 79               | 13                |
| Black lemur ( <i>Lemur macaco</i> ).....   | 140                   | 19                | 76               | 5                 |
| Jaguar ( <i>Panthera onca</i> ).....       | 62                    | 2                 | 69               | 29                |
| Leopard ( <i>Panthera pardus</i> ).....    | 96                    | 5                 | 69               | 26                |
| Tiger ( <i>Panthera tigris</i> ).....      | 146                   | 2                 | 92               |                   |

Mr. LEGGETT. Thank you very much, Mr. Bitely.

I know you do recommend that the Fish and Wildlife Service develop a draft amendment to the Endangered Species Act of 1973, so that in your preliminary statement, you are not suggesting legislation is not precisely accurate.

We will look at your recommendations, and I am not going to ask the Department to reply today, but before these hearing are over, we will have a reply to all of the questions raised by all of the witnesses, and we hope to get some kind of reconciliation. Thank you very much.

Mr. BITELY. Thank you, sir.

**STATEMENT OF RALPH BITELY, ADMINISTRATOR OF THE MARYLAND WILDLIFE ADMINISTRATION, INTERNATIONAL ASSOCIATION OF GAME, FISH AND CONSERVATION COMMISSIONERS**

Mr. BITELY. I am Ralph Bitely, Administrator of the Maryland Wildlife Administration which is a member of the International Association of Game, Fish, and Conservation Commissioners. The international association is a voluntary association whose government members include the wildlife agencies of all 50 States, 6 Canadian Provinces, and the Commonwealth of Puerto Rico. The Association is dedicated to coordinating efforts of public agencies responsible for preservation and management of the fish and wildlife of North America. I have served as chairman of the association's nongame and Endangered Species Committee and while I am not appearing on behalf of the Maryland Wildlife Administration, the administration agrees with the views of the international association set forth in this statement.

We appreciate this opportunity to state the views of the association concerning implementation of the Endangered Species Act of 1973. We would remind the subcommittee that this association has been concerned with endangered species for many years. In fact, the association has had a special committee dealing with the problems of the administration of rare and endangered species of wildlife since 1965. The Association also played a role in the development of the concepts that went into the formulation of the Endangered Species Act itself and participated actively in the dialog that led to the passage of the act.

We believe it is too early in the history of the endangered species program to consider comprehensive changes that might make the act more workable. We do have specific recommendations concerning implementation of the program, which we will deal with later, but in general we believe it would be well to permit the act to continue to operate for an additional period of time before endeavoring to focus on the shortcomings of the act itself.

Mr. LEGGETT. At this point, Mr. Baysinger, what is the problem with drafting regulations concerning the cooperative agreements?

Mr. BAYSINGER. That does not fall into my area; Mr. Schreiner will be available to answer that one.

Mr. LEGGETT. OK. Alert Mr. Schreiner.

Mr. BITELY. We do wish to comment on administration of the various provisions of the act by the Departments of Interior and Commerce. First, with respect to programs of the National Marine Fisheries Service, it must be said that this Agency has given only token recognition to the act and its implementation. We acknowledge that officials of the Agency have worked with the Department of the Interior in the development of regulations governing the taking of

endangered and threatened species. Little else has been accomplished by the National Marine Fisheries Service. It has but a single staff person in its Washington office responsible for its program. His responsibilities also include marine mammals under the Marine Mammal Protection Act of 1972. Obviously, with the very considerable program that Agency has had to undertake under the Marine Mammals Act very little effort has been left over for the Endangered Species Act. So far as we can tell this has not been a crucial matter. We know of no species under the jurisdiction of the National Marine Fisheries Service save perhaps the Atlantic bluefin tuna and the several sea turtles which might be considered for inclusion under the provisions of the Endangered Species Act. However, there is obviously a need to survey the marine biota to establish what species are in need of further protection.

In the Department of the Interior the Fish and Wildlife Service has been given an extremely difficult assignment in organizing and carrying out the broad responsibilities delegated in the Endangered Species Act. The Fish and Wildlife Service is required to take positive action of its own in identifying species whose survival may be threatened. In addition, it must respond to citizen concerns in this area. Moreover, it has responsibilities in connection with developing cooperative Federal-State aspects of an endangered species program. Individuals whose task it is to implement the act have been caught in the pincher made up of citizen demands on the one hand and practical realities on the other. The task is not an enviable one.

We commend the Fish and Wildlife Service for its effort in attempting to develop a system for carrying out its responsibilities under the Endangered Species Act. It is apparent to anyone who understands the complexity of the program that unless the affairs of the program are organized in a systematic manner so that there exist established procedures for determining the status of the species, for determining which should be listed in what order of priority, for establishing the programs needed within the Department of the Interior to give the species adequate protection, and for developing the cooperative programs needed within the Department of the Interior to give the species adequate protection, and for developing the cooperative programs with the States and other institutions, that the entire program will bog down in an administrative morass. Director Greenwalt, and his able Assistant Director Schreiner, have endeavored to bring reasonable order out of potential chaos and are to be complimented for their efforts. The fact that they have been forced to dissipate their energy and misdirect their efforts in responding to unfounded classification proposals has only made their problems more acute. They have performed as capable professional administrators and we believe that reasoned judgment would hold that they have done as well as anyone could have done under the circumstances. While the membership of the association does not necessarily concur in various actions taken by the Fish and Wildlife Service in administering the act, Director Greenwalt and Mr. Schreiner have sought to maintain a close liaison with State agencies potentially affected by decisions made under the act.

Were we to single out the major shortcoming of the Federal effort it would relate not just to the Service or the Interior De-



partment but to the administration as a whole. When the act was being considered by Congress it was widely recognized that the nature of the problem of threatened and endangered species was such that very close Federal-State cooperation would be required. The Federal Government was in no position to undertake the efforts at the local level to assure perpetuation of threatened or endangered species. In consequence encouragement of State participation through financial assistance as a key to success constituted a specific congressional finding. Additionally, the Conference report on S. 1983 states:

It should be noted that the successful development of an endangered species program will ultimately depend upon a good working arrangement between the federal agencies, which have broad policy perspective and authority, and the state agencies, which have the physical facilities and the personnel to see that state and federal endangered species policies are properly executed. The grant program authorized by this legislation is essential to an adequate program. Since the Federal Government is directing new, innovative and perhaps expensive programs, it seems only fair that it should also bear a significant portion of their costs. The conferees wish to make it clear that the grant authority must be exercised if the high purposes of this legislation are to be met. H. Rep. No. 93-740, 26 (1973).

Mr. Chairman, Congress plainly intended that unusual efforts be made to insure that State wildlife agencies be made partners in a genuine cooperative effort. Such has not been the case. While the Fish and Wildlife Service has maintained liaison with States there continues to be a good deal of uncertainty as to what is expected of the States. Delays have also occurred in connection with drafting of regulations under which States could request cooperative agreements. We understand that seven States have been found qualified for cooperative agreements Colorado, Delaware, Michigan, New Jersey, New Mexico, South Carolina, and Washington and that four State applications are in process Alaska California, Florida, and Tennessee. More important, though Congress authorized \$10 million through fiscal year 1977 for grant programs no funds have been appropriated and, indeed, no requests were made by the administration until this year when funds were requested for endangered species programs of the Department of Commerce. We do not ascribe the lack of funds exclusively to the Fish and Wildlife Service although we note that the Service has not been reluctant to press for funds for its own use. Indeed, in some cases instead of making funds available under cooperative agreements it has sought the opportunity to enter into contracts with States, using funds appropriated to it rather than putting the activity on a cooperative basis in which both partners share the responsibility. We have been assured that strenuous efforts will be made in forthcoming years to secure the needed appropriations to support the cooperative works which the act has imposed upon the States. You can be sure that if it is not forthcoming very strenuous efforts will be made by the association to urge that funds are made available or that the approach laid out in the Act for carrying out these programs is made more realistic.

Another criticism that must be laid before the subcommittee is that there have been elements in the Fish and Wildlife Service and the Department which seem to respond more readily to public clamor than to the real needs of a particular species. We refer

here to the way the Department has handled the cases of the grizzly bear, the eastern timber wolf, and the American alligator. You heard more about the alligator from other witnesses this morning. With respect to the grizzly, the primary basis for concluding that the grizzly bear should be put in threatened status was related to the alleged reduction in populations of the bears due to hunting in the three primary ecosystems in which they exist. In fact, of course, the grizzly bear has been protected totally in the Selway-Bitterroot Area for many years. In the Yellowstone ecosystem, while a few animals have been taken on the periphery of Yellowstone National Park by hunters, the principal mortality has been in Yellowstone Park wherein the bears have been killed by National Park Service personnel.

Mr. LEGGETT. Why has that been?

Mr. BITELY. I would ask Mr. Lenzini. Mr. Lenzini, the associations counsel, to respond to this.

Mr. LENZINI. Mr. Chairman, there has been a problem of human-bear conflicts in Yellowstone Park, and that has been a matter of some controversy for many years involving the feeding of bears from the garbage dumps in Yellowstone Park, and the removal of this as the source of food for the bears. In the last couple years, it seems the conflict has decreased, but until that time there was a good deal. I cannot tell you the number, but there was killing of the bears by Park personnel to reduce human-bear conflicts.

Mr. LEGGETT. OK. We have heard some of that.

Mr. BITELY. We do not agree with the Department's contention that hunting of grizzlies has threatened the species in the Bob Marshall ecosystem. We do agree with Interior's supplemental conclusion that the primary factors affecting the bear population in the Bob Marshall is the reduction in the amount of habitat essential to the bear's solitary nature and the increasing disturbance brought about by economic development of the resources of the area and greater human penetration by recreationists. In this connection we submit for the record a copy of comments dated March 3, 1975, prepared by the association and submitted to the Department of the Interior in support of our contention that the species should not be considered endangered. At the same time we would like to recognize the conscientious effort made by Mr. Schreiner to negotiate a workable plan for placing the grizzly bear on the threatened species list. It now remains for Interior to take the necessary steps under section 7 of the act to make sure that distracting and disturbing forces now at work in the area are reduced and eventually eliminated. Hopefully, their program will lead to an expansion of available grizzly bear range. If not, the listing action may well do little for the grizzly bear.

Although the ultimate plan for the needed protection for the timber wolf has not yet been finally agreed to, the principal expertise exists in the field, specifically in the biological staff of the regional offices of the Fish and Wildlife Service at Minneapolis, and in the staff of the State of Minnesota's Department of Natural Resources. Protection of the timber wolf under conditions which necessitates protection of livestock in the margins of the wolf range creates a difficult and complex wildlife management situation. There is simply no way that agriculture can exist in the marginal

areas without occasional removal of a wolf marauding upon livestock. At the same time there is no need for the destruction of wolves nor has there been any such destruction in the vast area of the Quetico Superior National Forest, which has been set aside as a wolf sanctuary. We believe that here is a clear case where the best result for the wolf would be protected status under State law so that limited taking could be permitted where the animals prey upon legitimate livestock interests outside the sanctuary. Such regulation should be accompanied by total protection and cooperative efforts to expand the wolf population into other suitable habitat in adjacent States, which, of course, has been attempted. In concluding this comment, we believe there has been a tendency on the part of Interior to react to ill-informed public outcry instead of following sound principles of wildlife management.

The controversies which have developed over the status of certain species emphasizes the most serious weakness of the endangered species program and the statute which authorized it. We refer to the lack of specific criteria against which the status of a species may be measured. This problem was recognized when the bill was being considered and the result was that the Secretary is admonished to seek out the best available scientific and commercial information. Mere numbers cannot be employed because the character of animal populations is such that some species might require small numbers while others need relatively large numbers for survival. Without reopening this knotty problem we urge that Interior and Commerce immediately, through a series of scientific conferences, undertake the development of the needed criteria for the principal taxonomic groups. There will continue to be differences of opinion over how one should go about preserving a species, but the contention can be reduced by establishing how we go about determining which are truly endangered or threatened.

Another problem that has developed is the insistence on the part of the Department of the Interior that all wildlife in a given State deemed by the Secretary to be endangered or threatened must be covered by cooperative agreements rather than only those for which the State wildlife agency has statutory authority. Some State wildlife agencies do not have authority over all invertebrates and thus, for example, were a species of butterfly to be listed by the Secretary as a threatened species in Arizona no cooperative agreement could be entered into or maintained with that State. Considering that this planet is called home by possibly 4 million animal species and subspecies it would be absurd to disqualify State programs for endangered birds, mammals, fishes, reptiles, and amphibians simply because authority may not exist in a State with respect to invertebrate species. If this be required by the act State agency participation may be severely limited and cooperative programs may either be short-lived or never reach signature stage.

Finally, Mr. Chairman, I would like to present for your consideration the seven recommendations stemming from the work of our Nongame and Endangered Species Committee this past year. These recommendations represent the principal actions which we believe should be taken to firm up the total cooperative approach toward the preservation of threatened and endangered species. We believe they

represent the product of a thoughtful review of the whole program and that if followed they could hasten achievement of the goals of this legislation as originally envisioned by the Congress. They are as follows:

#### RECOMMENDATIONS

One: The U.S. Fish and Wildlife Service be requested to prepare a flow chart and explanation of procedures followed in the listing, delisting, and reclassification of candidates for threatened and endangered species classification. Such information will be extremely valuable in developing a better understanding of the sequence of steps and timing involved in this procedure. Such action will be helpful to all individuals and agencies involved in endangered species programs.

Two: The Fish and Wildlife Service be requested to adopt an "early warning" system for notifying affected states of pending action to classify species as threatened or endangered. It is suggested that states be notified at the time petitions are received by the Service and prior to publication of notice in the Federal Register. Notification could be in the form of a copy of the letter of petition and a listing of substantiating data.

Three: The U.S. Fish and Wildlife Service be asked to develop a draft amendment to the Endangered Species Act of 1973 that would provide for changes necessary for accelerated implementation of the act. Such an amendment would provide for the issuance of cooperative agreements for those species for which a State has management authority. It should also provide an optional provision for the orderly development of programs for threatened and endangered plants and invertebrates for those states seeking programs for these groups.

Four: A flow chart should be developed by the Service to depict in detail the procedures to be followed in the issuance of permits for the taking of endangered or threatened species.

A clearer explanation of this important and complex procedure will be helpful to everyone involved in the issuance of permits at both the State and Federal level.

Five: The IAGFCC should use its influence in support of legislation that will fund grant-in-aid programs for threatened and endangered species. Such funding is vital to the implementation of adequate programming for these species.

Six: The Service should give special consideration to the development of procedures for the listing of critical habitat. The program of many agencies will be significantly affected by such listings. There is need to develop guidelines and criteria that will reduce to a minimum any unwarranted impact that could result from the shotgun application of his aspect of the act of 1973.

Seven: A method should be developed whereby a select group of consultants from the IAGFCC would assist the Director of the Fish and Wildlife Service in matters pertaining to threatened and endangered species in order to implement the close coordination of State and Federal agencies as prescribed in the Endangered Species Act of 1973.

[The documents follow:]

INTERNATIONAL ASSOCIATION OF GAME, FISH  
AND CONSERVATION COMMISSIONERS,

March 3, 1975.

Re Grizzly Bear; Proposed "Threatened" Status in the  
Conterminous 48 States; 40 Fed. Reg. 5 et seq. (January 2, 1975).

DIRECTOR (FWS/LE),  
U.S. Fish and Wildlife Service,  
P.O. Box 19183,  
Washington, D.C.

GENTLEMEN: The following comments are submitted in connection with the referenced proposal on behalf of the Grizzly Bear Committee of the International Association of Game, Fish and Conservation Commissioners. The comments which follow represent the position of IAGFCC and implement Resolution No. 2 adopted by the Association on September 13, 1974 (copy attached). A special committee on the Grizzly Bear, comprised of recognized experts on this species, was appointed by IAGFCC President Woodward during 1969. A preliminary report was submitted to the Association in 1971 (Proceedings of the Sixty-First Convention, IAGFCC, Sept. 13-15, 1971, pp. 230 et. seq.) and in November 1972 the Committee requested that the Secretary of the Interior initiate a research team in cooperation with Montana, Wyoming, Idaho, the U.S. Forest Service, BSWF, and the National Park Service. The Interagency Grizzly Study Team is now functioning.

The listing by the Secretary of a species of wildlife as endangered or threatened is, in the words of a Senate sponsor of S. 1983, "a delicate and highly specialized task." 119 Cong. Rec. S 14515 (July 24, 1973) (remarks of Mr. Tunney). Section 4(b) (1) of Public Law 93-205 mandates that the Secretary "shall make determinations required by subsection (a) of this section on the basis of the best scientific and commercial data available to him . . ." Thus, "the Secretaries [of the Interior or Commerce] must use the best scientific data to make this determination." 119 Cong. Rec. S 14516 (July 24, 1974) remarks of Mr. Stevens). More than that, scientific evidence must serve as the basis for the determination. Thus even though a statute does not in terms require publication of findings in arriving at a determination based on best available scientific evidence, the determination must possess a factual basis and the published statement accompanying a proposed rule "must be sufficiently detailed and informative to allow a searching judicial scrutiny of how and why the regulations were actually adopted." *Amoco Oil Co. v. Environmental Protection Agency*, 501 F. 2d 722, 739 (CA10 1974).

Viewed against these substantive and procedural requisites, the proposed determination on the grizzly bear is dramatically inadequate in the following particulars:

1. The determination of the Secretary through the Director of the Fish and Wildlife Service proposed to list the grizzly as a "threatened" species in the lower 48 States. The determination states: "This position is taken recognizing that reliable population status information is unavailable except for the Yellowstone Ecosystem; and even here there are conflicting estimates of the population."

We submit that the Director has failed to take account of available scientific evidence. A report prepared by the Wyoming Game and Fish Department entitled "1973 Wyoming Grizzly Bear Observations" reflects the strong possibility that numbers of grizzly bear sighted in Wyoming outside Yellowstone Park is increasing. That report was previously submitted to the Fish and Wildlife Service in June 1974. In addition the proposed determination fails to take account of the implications of harvest statistics submitted to the Fish and Wildlife Service by the Montana Department of Fish and Game. Montana has recorded virtually complete hunter harvest statistics for many years and, particularly with respect to the Bob Marshall area, the data plainly demonstrate stable population levels.

2. The Report of the Committee on the Yellowstone Grizzlies of the National Academy of Sciences concludes that there exists "no convincing evidence that the grizzly bears in the Yellowstone Ecosystem are in immediate danger of extinction." Conclusion 18, p. 38. Significantly the NAS Committee's management recommendations assert that in development of joint programs to conserve the Yellowstone grizzlies "no state or federal agency need cede their basic authority." (P. 39.) The NAS Committee was certainly aware of the provisions of Public Law 93-205 relating to classification of a species as "threat-

ened" and the Committee declined to recommend such a listing is persuasive that it perceived no need to supplant state management authority in the Yellowstone Ecosystem.

3. Finally, the Western Association of State Game and Fish Commissioners and the Interagency Grizzly Study Team have passed resolutions expressing the view that any listing of the grizzly bear should be postponed until studies currently underway are concluded.

4. Among factors set forth in support of the proposed listing the Director refers to present or threatened destruction, modification or curtailment of habitat or range. As pointed out in comments on the instant proposal by the Wyoming Game and Fish Department, over ninety percent of presently known range of the grizzly in the Yellowstone system is classified as wilderness and thus is not subject to extensive change. Additional fringe areas (Beartooth Plateau and Clark's Fork) are under consideration for inclusion in the Wilderness system. As pointed out by the Montana Department of Fish and Game under cover of Director Woodgerd's letter dated October 7, 1974 to Associate Director Schreiner, a preserve of approximately 1.2 million acres within the Bob Marshall which is closed to all hunting plus roadless acreage in the Montana portion of the Bob Marshall of over 1.3 million acres affords considerable protection for grizzly bear habitat.

5. Referring to overutilization for commercial sporting, scientific or educational purposes as a cause of "threatened" status, we are aware of no appreciable taking of grizzly for commercial, scientific or educational purposes.

(a) According to the Wyoming Game and Fish Department no grizzly bear has been taken in Wyoming for such purposes during the past thirty years.

(b) With respect to killing of bears in control operations to prevent livestock depredations, significantly grizzly mortality has occurred mainly through the activities of the Division of Wildlife Services of the Fish and Wildlife Service. Indeed, in Idaho practically all grizzly mortality in the recent past has been caused by federal predator control. State wildlife agencies are on record in opposition to such routine killing. (c) With respect to sport hunting the proposal states that legal sport hunting is continuing in two of the three States where grizzlies still occur. This statement is factually inaccurate as of today and as of the date of publication of the proposal. No sport hunting of grizzly has been permitted in Idaho since July 1946, and Wyoming has placed a two year moratorium on hunting for 1975 and 1976. (d) The reference to the Montana Cooperative Wildlife Research Unit and the National Academy of Science as concluding that total mortality is considered excessive refers only to the Yellowstone Ecosystem. Significantly, neither the Montana Cooperative Wildlife Research Unit nor the NAS Committee recommend threatened status.

6. The Committee is of the view that the proposal for limited sport hunting the activities of the Division of Wildlife Services of the Fish and Wildlife in the area designated as the Bob Marshall Ecosystem strongly suggests that the grizzly bear is not "threatened" in that area. The Position Paper, citing Craighead, J. and Bumstead, R., state that a substantial number of bears exist in the Bob Marshall Ecosystem and that it may be beneficial to survival of the species if a controlled sport hunt is permitted. In light of Director Woodgerd's letter dated November 25, 1974, to Director Greenwalt setting forth Montana's intention with respect to control of overall number of bears removed we can see no logic in listing the grizzly as threatened in the Bob Marshall if the net result is apt to be simply a federal sanction of regulations imposed by the State.

7. Section 4(b)(2) of Public Law 93-205 requires that in determining whether a wildlife species is endangered or threatened the Secretary "shall take into consideration those efforts, if any, being made by any nation or any political subdivision of any nation to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices . . . ." We see no evidence that the Secretary has taken into consideration the efforts of Idaho, Montana and Wyoming to conserve grizzly bears within their borders. We consider it a serious defect that neither the proposal nor the Position Paper discuss the adequacy or inadequacy of (a) grizzly management by the Idaho Fish and Game Department which since 1946 has prohibited sport hunting of grizzly because in Idaho's view a surplus has not existed; (b) the Wyoming Game and Fish Department Grizzly Bear Management Plan submitted to the Fish and Wildlife Service on June 17, 1974; or (c) the Montana Fish and Game Department's Grizzly Bear Management

Plan (Revised October 12, 1974) and revised further by letter dated November 25, 1974 from Director Woodgerd to Director Greenwalt. Lacking any contrary indication it must be assumed that the statutory mandate of section 4(b)(2) has not been fulfilled.

#### CONCLUSION

The proposal to list the grizzly bear as a threatened species is not supported by the best available scientific evidence as required by section 4(b)(1) of Public Law 93-205. Indeed, the best available scientific evidence suggests that grizzly populations, except possibly in the Yellowstone area, are generally stable.

The procedural philosophy utilized by the Fish and Wildlife Service in the instant proposal is best exemplified by the statement set forth in the Position Paper regarding Yellowstone grizzly that "the grizzly bear must be regarded as 'threatened' in the Yellowstone Ecosystem until there is positive proof that it is not." (P. 11.) Such a shifting of the burden of proof finds no support in the statute. The opposite of course is true in the requirement that the Secretary base his determination on the best scientific evidence. As the U.S. Court of Appeals for the District of Columbia Circuit has recently stated in another context, "It is precisely a devotion to *facts*, not hunches, that distinguishes the professionals from the amateurs in assessing risks . . ." *Ethyl Corp. v. Environmental Protection Agency*, No. 73-2205 (January 28, 1975), slip opinion at p. 15.

Moreover, the proposal ignores completely the mandate of section 4(b)(2) by failing to take into consideration the management efforts of Idaho, Montana and Wyoming.

The issue is not whether the grizzly needs help. Plainly it does need help in the Yellowstone area and in Selway-Bitterroot and the States and land managing federal agencies involved are committed to preservation of the grizzly as their management programs indicate. Reiterating, we do not believe it can be said that scientific evidence—facts—demonstrate that the grizzly is threatened with extinction in any of the three areas. In the Bob Marshall area the available evidence plainly indicates a stable population. In accordance with resolution of the International Association, copy attached, we urge that the Secretary through the Director of the Fish and Wildlife Service determine that there does not exist adequate evidence to classify the grizzly bear as endangered or threatened at this time and to review its status after a period of two years at which time information from studies now underway and the results of the no-hunting policy adopted by the affected States for the Yellowstone and Selway-Bitterroot areas will be available.

Respectfully submitted,

JOHN S. GOTTSCHALK,  
*Executive Vice President.*

Mr. LEGGETT. Our next witness is Mr. Robert Wagner, executive director of the American Association of Zoological Parks and Aquariums accompanied by Mr. William Braker, director, Shedd Aquarium, Chicago, also of the American Association of Zoological Parks and Aquariums.

#### STATEMENT OF ROBERT WAGNER, EXECUTIVE DIRECTOR OF THE AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS

Mr. WAGNER. Mr. Chairman, this is Martin Jacobs, our legal counsel.

Mr. Chairman and Members of the Committee, thank you very much for the invitation to the American Association of Zoological Parks and Aquariums (the "AAZPA") to have representatives appear before you today.

My name is Robert O. Wagner. I have been executive director of the AAZPA since May 1975. Prior to that, I was director of the

Jackson, Mississippi Zoological Park for 11 years. I am also a former Vice President and Director of AAZPA.

#### I. BACKGROUND OF THE AAZPA

The American Association of Zoological Parks and Aquariums was founded in 1924. The AAZPA initially was a branch of the American Institute of Park Executives; it then became a branch of the National Recreation and Park Association. In January 1972, the AAZPA was established as an independent nonprofit organization.

The membership of the AAZPA consists of fellow members—primarily individuals employed full time in a management capacity on the administrative, scientific, maintenance, or supportive staff of a zoological park or aquarium in the Americas; associate members—persons interested in the objectives of the Association, including zoological park and aquarium personnel; institutional members—zoological parks and aquarium, zoological park and aquarium societies, private wildlife exhibitions, game preserves, and related entities; and commercial members—companies, individuals, and consultants which supply and service the zoo, aquarium, and conservation field).

The AAZPA membership presently numbers approximately 1,500. Included in this membership are approximately 150 zoological parks and aquariums, as well as zoological and aquarium societies with total membership of approximately 250,000 persons.

Every major zoological park and aquarium in the United States is a member of the AAZPA, making it the largest organization of its type in the world. The membership also contains the professional staffs of these organizations, who are among the most experienced persons in the United States in the care and handling of wildlife. Also included in the membership are the zoological animal suppliers which supply zoos and aquariums with wildlife. The AAZPA is the spokesman for these organizations and their personnel, governing bodies and zoological societies, as well as their supportive zoological animal suppliers.

The Association also has an interest in preserving and enhancing the wildlife collections of its members. These collections make an important contribution to the education and enjoyment of the more than 113,000,000 persons who annually visit these collections in the United States.

Undoubtedly, the most significant contribution zoos and aquariums have made to wildlife conservation is in the area of public education. With well over 113,000,000 visitors annually, zoos and aquariums have an unmatched opportunity to build understanding of wildlife problems. Many major zoos and aquariums have education programs, in which conservation is a major theme. Just over 70 percent of the U.S. populace live in urban and suburban areas. For these people, zoos and aquariums are "urban national parks" where they have a personal contact with and exposure to wild animals—for the great majority the only firsthand contact.

Internationally, both in scientific and in conservation matters, the AAZPA is looked upon as the leader among national zoo and aquarium organizations. By request, all international zoo federations have sought communication with the AAZPA on scientific and technical



matters. The AAZPA has since 1963 been a member of the International Union of the Conservation of Nature and Natural Resources and a leader in its survival service group. Prior to 1966, international trade in live wild animals was virtually uncontrolled, except for health regulations. In 1966, the AAZPA adopted a resolution binding its members to acquire wild-caught orangutans only if there was evidence of legal export from country of origin.

Subsequently, the Japanese and several other zoo federations adopted similar policies. This action was lauded by IUCN for its far-reaching effect around the world and as a pace-setting policy. In subsequent resolutions, AAZPA members extended the same protection to other endangered species.

## II. EARLY EFFORTS OF THE AAZPA TO PROMOTE PROTECTION OF ENDANGERED SPECIES

The AAZPA has been in the forefront of worldwide efforts to protect endangered species. Indeed, the AAZPA in 1967 was responsible for popularizing the phrase "endangered species," which for some years prior to that had appeared on exhibit display signs at zoos.

In March 1967, before the Federal government expressed any concern with endangered species the AAZPA adopted resolutions binding the membership on dealings in such species. I have set forth below the complete text of the resolutions. I am sure you will find a startling similarity between the language we used in 1967 and that used in the Endangered Species Act of 1973:

**Whereas:** The members of the American Association of Zoological Parks and Aquariums share the world-wide concern for preserving rare and endangered wildlife species. We commend and support the efforts of conservation and zoo authorities in our own and other nations to protect wildlife populations by measures such as maintenance of preserves, regulation of hunting and trapping, and control of the traffic in wild animals and wild animal products.

A minority of the threatened species are represented in zoo collections. In most instances, the chief threat to such species is alteration of their habitats. In almost all cases, the numbers of specimens collected for zoos is insignificant by comparison with the numbers killed for meat, trophies, hides, horns, and other purposes, and the numbers collected for the pet trade and laboratory use.

A number of the threatened species are inadequately protected in the wild, so that their preservation seems improbable. In such cases, and with the concurrence of conservation groups, we advocate judicious collection and placement of specimens in zoos or other centers capable of propagating these species in captivity.

For a few species, however, zoo collection can add significantly to the drain on an endangered wild population. This is especially the case if zoo purchases encourage or support illegal capture or smuggling. In such cases, the members of this Association stand ready to impose responsible self-discipline upon themselves and to cooperate with international conservation groups and zoo associations in other countries; now therefore be it

**Resolved:** 1. That the members of the AAZPA recognize that the Monkey-Eating Eagle (*Pithecophaga jefferyi*), the Javan Rhinoceros (*Rhinoceros sondaicus*), and the Sumatran Rhinoceros (*Didermoceros sumatrensis*) are so gravely endangered that removal of a single individual from the wild contributes significantly to their jeopardy. No member of this Association will purchase, offer to purchase, sell, offer to sell, capture, encourage the capture of, donate, accept as a gift or deposit, or trade any individual of these species. Excepted from this provision are specimens made available by a government or conservation body, if the AAZPA Subcommittee on Endangered Species approves the specific case.

2. That the members of the AAZPA recognize that the illegal capture and subsequent traffic in Orangutans (*Pongo pygmaeus*) and the Galapagos and Aldabra Tortoises (*Testudo elephantopus*) are significant threats to the survival of these species. No member of this Association will purchase, offer to purchase, sell, offer to sell, capture, encourage the capture of, donate, accept as a gift or deposit, or trade any member of these species, unless: The Subcommittee on Endangered Species of the AAZPA determines that a specific member of such species was legally collected and moved from its country of initial origin; or that it was born in a recognized zoo; or that it has been made available through international agreement on disposal of confiscated animals; or that the animal in question was in a recognized zoo collection prior to February 1966. (This action does not interfere with transactions completed prior to the approval on March 14, 1967 of this resolution as it concerns the Aldabra Tortoise.) The membership of the AAZPA empowers the Subcommittee on Endangered Species to make such determinations.

3. That the Board of the AAZPA, by a two-thirds vote, which may be taken by mail or telephone, may add new species of subspecies to those named in sections 1 and 2 above, and such additions shall take effect on proper notification of the membership. Such additions shall be effective only until the next regular meeting of the membership.

4. That any member in any classification of the Association acting in violation of this Resolution shall be subject to disciplinary action, including expulsion, by the procedures set forth in the Constitution and Bylaws of the Association.

5. That any member in any membership classification of the Association who is convicted through proper judicial process, of violating the wildlife protection laws of any nation may be subject to disciplinary action, including expulsion, for conduct prejudicial to the welfare of this Association. In such case, the Board shall give full consideration to all surrounding circumstances.

6. That a Subcommittee on Endangered Species shall be established and maintained under the guidance of the Association's Conservation of Wildlife Committee. This Subcommittee shall maintain cooperative relationships and exchanges of information with our governments' officials responsible for animal import regulations, with the IUCN and other national and international conservation groups, and with other zoo associations. The Subcommittee shall gather information on the status of rare and endangered species and on the measures adopted to protect them, including laws and regulations, and make this information available. The Subcommittee shall also seek to gather information on the traffic in animals illegally captured or exported.

7. That this Resolution shall substitute for and supersede a resolution promulgated in September 1962 by AAZPA, relating to endangered species, with the exception of the Aldabra Tortoise, added to this resolution at this time.

8. This Resolution, or any amendments thereto, shall be deemed effective upon publication in the AAZPA Newsletter and/or upon receipt of a copy of the resolution by the recipient member, whichever date comes first.

9. That, on advice of Counsel, the Officers of the AAZPA may make technical changes in the phrasing of this resolution which do not affect its substance and intent.

Periodically, after March 1967 the resolutions were amended to add other species as endangered. Then, in 1969, our membership supported active adoption of the Endangered Species Act of 1969. Unfortunately, Congress did not call upon the expertise of the zoological institutions of the United States for assistance on the bill that became the Endangered Species Act of 1973.

### III. PROBLEMS ENCOUNTERED BY AAZPA MEMBERS WITH USDI ADMINISTRATION OF THE ENDANGERED SPECIES ACT OF 1973

You will be hearing later today from other witnesses on the very significant efforts of American zoological institutions in propagating in the United States, species that are endangered and threatened in the wild. I would now like to tell you of some of the problems we

have encountered with Interior's interpretations and administration of the Endangered Species Act (the "Act").

#### A. DELAY IN ADOPTION OF REGULATIONS

The act became law on December 28, 1973. Today, almost 2 years later, there is still not a comprehensive set of administrative regulations.

The greatest problems experienced by zoological institutions under the act are not in the area of importing of endangered wildlife. Rather, they arise in the shipment among zoos of surplus specimens of endangered species. Until last Friday (September 26, 1975) the principal guidelines of USDI were contained in a "fact sheet" (undated but issued in the fall of 1974, a copy of which is attached to this statement). This document is not, to our knowledge, published in the Federal Register. Its force, as we understand it, is to spell out the procedures filed by USDI as to enforcement under the act.

On September 26, USDI published in the Federal Register regulations under the heading "Reclassification of American Alligator and Other Amendments". This is Interior's first attempt at publishing regulations of a general nature under the act. You will hear from the next speaker, William B. Braker, about particular problems we have with these new regulations.

#### B. DELAYS IN PROCESSING OF PERMITS

As matters now stand, any zoological institution wishing to sell, donate or loan an animal on the endangered species list to another institution may not do so unless the animal is exempt or one of the following points contained in the USDI fact sheet is applicable:

(1) Endangered species may be shipped in interstate commerce where the purpose of such shipment is to place the animal on loan to another individual or institution. If the receiver later obtains a permit under the act, the animal may be legally purchased by the receiver at the time he receives the permit.

(2) An endangered animal may be shipped in interstate commerce where the purpose of such shipment is to make a bona fide gift to another individual or agency without any assurance of any gain or profit by barter, credit, or any other form of compensation whatsoever. This is permissible even if at some future time in a totally unrelated transaction the original receiver ships a different animal to the original donor as a gift, and again there has been no assurance of any gain or profit by barter, credit, or any other form of compensation. This must be, however, two separate transactions neither of which took place in the course of a commercial activity.

The zoos of this Nation are making very important contributions to the propagation within the United States of species endangered in the wild. These activities are fully consistent with the purposes of the Endangered Species Act of 1973. Unfortunately, the bureaucratic administration of this act by the Department of the Interior has seriously hampered our efforts. The AAZPA is hopeful that these hearings will result in significant improvements in the climate accorded zoological organizations and their efforts at propagating endangered wildlife.

Thank you very much.

Mr. LEGGETT. We thank you very much, Wagner. It is nice to see you again, Mr. Braker.

**STATEMENT OF WILLIAM BRAKER, DIRECTOR, SHEDD AQUARIUM, CHICAGO, AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS**

Mr. BRAKER. Thank you, Mr. Chairman.

Mr. LEGGETT. Your statement is in the record.

Mr. BRAKER. I am not going to refer to that. I just want to mention briefly, and I know you will be happy about that, some of the problems that zoos and aquariums have experienced, to point out what our frustrations have been in the last few years.

Most of my prepared text, a great deal of it comes from a speech I have been using to barnstorm the country, called Big Brother Is Watching the Animals, and that points out pretty well some of the problems we had with Federal legislation, with bureaucratic regulations, with interference in our institutions by human societies.

Particularly, I want to refer to two of the provisions of the Endangered Species Act that Mr. Steele mentioned this morning, that the act looks to protect exotic species, and also the ecosystem on which the species depends.

You heard Mr. Steele describe how the range in the ecosystem of the Bengal tiger is shrinking, and this is indeed the case, and I submit the act is doing very little to protect the range of the Bengal tiger, or to do anything about the Siberian tiger, and incidentally, there are an estimated 300 Siberian tigers in the wild, and 400, would you believe, in zoos, around the world. So we have more Siberian tigers in captivity, most of which were born in zoos, that now exist in the wild.

The same type of things can be applied to Madagascar where forests are being cut down for the lumber, where lemurs, some of the most primitive primates are being literally driven out of their homes.

The act is doing nothing to stop that.

In Africa—

Mr. LEGGETT. How do you propose an act that is operable within the United States, that can relate to that situation?

Mr. BRAKER. I really don't know, Congressman. I did not write the act. I think it is an unworkable provision in there.

Mr. LEGGETT. You think you resist our legislation, imagine what the Indians would do if you tried to legislate over them.

Mr. BRAKER. That is my point.

Here you have got people in Africa who go out and kill a gorilla because he is raiding the vegetables.

You will not tell him that he cannot kill that gorilla, any more than you can tell sheep herders in the southwest of the United States that they cannot put cynide out to kill the coyotes.

But at any rate, we are not protecting the ecosystem, so the act is ineffectual in that respect, and it is being counterproductive, because the efforts to get good gene pools of these animals in the United States are being thwarted and hampered, mostly through the requirements of the permit system.

I do want to point out one very absurd case, involving the Brookfield Zoo in Chicago. This gives you an example of some of the frustrations we have had.

Brookfield Zoo was asked by the Department of Interior to take some contraband Nile crocodiles that were confiscated. There were six hatchlings, and one died when they picked them up, and so Brookfield wound up with five baby crocks.

They were not the property of Brookfield. They remained the property of the Department of Interior.

After about 3 years, the crocs got too big, they had to be moved from Brookfield to somewhere else, so they found a new home down in Crandon Park Zoo in Miami.

It took Brookfield and Crandon Park Zoo 7 months to get a permit to move those crocodiles, which were the property of the Interior Department, from Chicago to Miami.

I submit this is really absurd. In the meantime, Brookfield boarded these animals at their own expense, and when they crated them and shipped them to Miami, the Department of Interior refused to pay the crating and shipping charges, so something there is not quite right.

Mr. LEGGETT. Did that permit have to be published?

Mr. BRAKER. I assume it did. It had to be published, 30 days, the whole thing.

Mr. LEGGETT. Are you familiar with that case, Mr. Baysinger?

Mr. BAYSINGER. Not the details. It is generally as Mr. Braker stated.

Mr. LEGGETT. Can you explain it?

Mr. BAYSINGER. The animals were seized. They were our property. They came under the act, and the Department was not exempt.

In order to get permits, we had to go through the system, and in the early days, the permit system was not as efficient I suppose or as rapid as it could have been or should have been, and the thing is as Mr. Braker indicated.

We will provide for the record the details.

Mr. LEGGETT. Fine.

[The following was submitted:]

#### THE NILE CROCODILE CASE

The Nile crocodiles were seized and forfeited to the Government in the course of an investigation and prosecution under the Endangered Species Conservation Act of 1969. They are the property of the U.S. Government.

The crocodiles were loaned to the Brookfield Zoo for their use. The terms of the loan were set forth in the "permit" to which everyone refers. This was not a permit in the usual sense of the word, but in fact was a loan agreement. We have since stopped using permits for this purpose, and now use actual loan agreements instead.

The "permit" was not issued pursuant to the 1973 Act, and therefore was not subject to the publication requirements of the Act. In fact, the crocodiles are exempt from the Act under the terms of section 9(b), since they were being held for noncommercial purposes at the time the Act went into effect. Therefore, the only restrictions on their movement are contained in the original "permit"-loan agreement issued in 1973.

With this in mind, the statements of Messrs. Braker and Baysinger are erroneous and are irrelevant to the present situation regarding the time required to issue permits under section 10 of the Act.

One of the conditions of the original "permit"-loan agreement was that no transfers be made without the permission of the Fish and Wildlife Service.

The first contact, for which we have records, requesting approval of such a transfer was made on August 14, 1974. On that date the U.S. Fish and Wildlife Service received a letter dated August 6, 1974, from Mr. Ray Pawley, Curator, Reptiles and Birds, Chicago Zoological Park (Brookfield Zoo), requesting permission to send the Nile crocodiles to a zoo in Florida. In this letter Mr. Pawley requested a reply to a December 1973 request to relocate the Nile crocodiles to a zoo in Miami, Florida. The U.S. Fish and Wildlife Service has no record of a request from Mr. Pawley dated December 1973.

On September 9, 1974, the U.S. Fish and Wildlife Service received a letter dated August 29, 1974, from Dr. Gordon Hubbell, Superintendent, Crandon Park Zoo, Miami, Florida, requesting a permit to transfer five live Nile Park Zoo, Miami, Florida, requesting a permit to transfer five live Nile crocodiles from the Brookfield Zoo to the Crandon Park Zoo. On September 24, 1974, the U.S. Fish and Wildlife Service responded to Dr. Gordon Hubbell (with a copy of the letter also being forwarded to the Brookfield Zoo) authorizing the transfer of the five Nile crocodiles from the Brookfield Zoo to the Crandon Park Zoo. The authorization was in the form of a letter, not a permit.

As further background to the situation it should be pointed out that the Chicago Zoological Park (Brookfield Zoo) was authorized on April 24, 1973, to possess the Nile crocodiles for exhibition and propagation purposes. Thus, that institution, and now the Crandon Park Zoo, have had the use of valuable endangered animals, at no cost to themselves other than normal maintenance and shipping expenses, for several years.

Mr. BRAKER. You heard earlier, 90 to 100 days now to get a permit through.

I think you felt that was a little too long. I think our Canadian friends across the boarder can give us some help in this matter.

I just met a gentleman up in Calgary who is Mr. Schriner's or Mr. Baysinger's counterpart in Canada, and it takes them 3 days to get a permit through. So there is nothing quite right here.

I want to talk a minute just about the advances that zoos have made in breeding programs.

Now, it has been suggested that the reason zoos are breeding so many animals these days is because of Federal restrictions on importing these animals.

I submit this is not correct. Just look at the orangutan. Since 1879 there have been 290, approximately, imported into this country. That is 3 orangutans a year divided among the 150 zoos. That is not a lot of animals.

In that same time frame, 112 orangutans have been born in the United States; half of them were born up until 1967, and the other half have been born since 1967.

I think this indicates that zoos are learning a lot about the feeding and dietary requirements, and they should be allowed to move them freely.

I can go on, but I think you have probably heard it.

Mr. LEGGETT. You got your point across. We have the overall statistics of Dr. Seal concerning the effectiveness of the propagation efforts.

Mr. Jacobs?

Mr. JACOBS. I just wanted to make one point, in reference to a question you asked previously that I did not think was fully covered.

Our association and its members, the commercial and noncommercial members, do not quarrel with the concept of the act as far as requiring permits of animals from the wild.

We are in full accordance with that, and we have had our internal regulations on that long before the Department of Interior or any other Government agency got into the act.

Our concern is with the movement among qualified institutions, and we just do not mean the nonprofit zoos. They are just a part of it.

What we quarrel with is the delays and tremendous problems of the movement, and the proposal, that I studied in the Federal Register on captive self-sustaining populations, is totally inadequate to deal with our problem, and whether the Department of Interior can cope with it in some other fashion, we don't know, but those proposals don't make any sense.

Mr. LEGGETT. Very good. I hope you communicate that to the Department.

Mr. JACOBS. We have in our comments to them, but they were totally ignored.

Mr. BRAKER. If I may say one more thing—

Mr. LEGGETT. I think you ought to have a three or four day procedure for transferring animals between qualified institutions. It just seems ridiculous to take a long period of time. I can appreciate the fact, that involving the transfer of an animal to an unknown location, where you do not know the quality of the receiver, but I think in a particular period of time, we should know the quality of most of the institutions, and the capacity for maintenance, and I would hope that we would get up to speed, so I would ask the Department to comment on that.

Mr. Oberstar?

Mr. OBERSTAR. I do understand for each transfer, that you have to go through some laborious process, is that correct?

Mr. BRAKER. Absolutely. The same process is done over and over again.

Mr. OBERSTAR. Would it not make more sense if the Department would review all of the public and commercial zoos in the country, and evaluate them, certify them, and once they meet some criteria for transfer, then just make you keep records and reports to them the transfers.

Mr. BRAKER. That is fine. Our organization has an accreditation program now ongoing. We as an organization are policing ourselves, and we hopefully in the near future will have all of the zoos and aquariums in the United States accredited, or at least reviewed.

Now, if the Department of Interior would accept our own accreditation program, that would be fine. The hospitals do it, the schools do it. I can see no reason why zoos and aquariums cannot do it.

Mr. OBERSTAR. Certainly. That is your main problem, the shipping of creatures from one zoo to another?

Mr. BRAKER. We do not quarrel with the concept of getting a permit to bring an animal out of the wild, as long as that permit is administered and processed, with some reasonable length of time, but to ship it between qualified institutions, we feel we should have the right to do that.

Mr. OBERSTAR. You said, either you or one of the other witnesses, cited the example of the monkey-eating eagle that it is such a unique ecological circumstance, that it probably should not be disturbed.

Mr. BRAKER. I would say in this particular case, the monkey-eating eagle, that is correct, because in the Philippines, the main cause for the demise of the monkey-eating eagle is trophies for local fireplaces. That is the big use for those monkeys, not the zoos.

There are probably about seven or eight of these eagles in zoos around the world. I think, possibly two or three in the United States.

Mr. WAGNER. We are not asking for an exemption to remove animals from the wild into other areas.

We feel that should be done by permit procedure, where we should justify every portion of it.

What we are seeking is more consideration in the movement of those animals held in captivity, which we think do not have any bearing at all on the extant wild population.

We want freedom of movement, of the animals that we are propagating in captivity.

Mr. OBERSTAR. I think there ought to be a procedure to do that, and if the Department does not come up with one may be the committee can do something.

Mr. LEGGETT. Thank you, gentlemen. You are very helpful.

[Documents following Mr. Wagner's prepared statement follow:]

#### ENDANGERED SPECIES ACT OF 1973

##### PROHIBITIONS AND PERMITS

The Endangered Species Act of 1973 places new restrictions on the taking and trafficking of certain animals. At this time there are no "threatened species" designated and all statutory restrictions apply to those animals listed as "endangered species" under previous legislation. Such list may be found in the regulations at 50 CFR, Part 17. This paper briefly outlines the exclusion, prohibitions, and permit procedures under the Endangered Species Act of 1973. More specific information may be obtained from the statute itself.

##### EXCLUSION

Endangered species (live or products, such as coats, rugs, hunting trophies, curios) which were held in captivity or in possession on December 28, 1973, and not held in the course of a commercial activity, are exempt from the Act and may be freely traded. Commercial activities include trades and barter, as well as direct sales, but do not include outright gifts.

Endangered species held by a public zoo (municipal, county, State or Federal zoo, or nonprofit institution) on December 28, 1973, will be considered to be excluded from the prohibitions, unless, on that date, the animal was the subject of an agreement to sell, barter or trade. However, endangered species held on December 28, 1973, by commercial zoos (those operated for profit) are all subject to the prohibitions.

All progeny of endangered species held on December 28, 1973, are covered by the Endangered Species Act and the prohibitions apply. Progeny for this purpose includes animals born after December 28, 1973.

When endangered species (live or products) which are exempt from the prohibitions of the Endangered Species Act by virtue of the above exclusion are transferred or shipped interstate documentary evidence supporting this exclusion should be included in the shipment or readily available.

##### PROHIBITIONS

The Endangered Species Act of 1973 prohibits, among other things, the following activities with regard to endangered species covered by the Act:

- (1) Importation;
- (2) Exportation;
- (3) Taking (under certain circumstances) and,—if an animal is illegally taken—possessing, selling, delivering, carrying, transporting or shipping, and
- (4) Commercial activities in interstate or foreign commerce, including delivering, receiving, carrying, transporting, shipping, selling, or offering for sale.



## ACTIVITIES NOT PROHIBITED

Interim policies have been adopted to clarify the above prohibitions which allow the following activities to be engaged in as not prohibited by the Act:

(1) Endangered species may be shipped in interstate commerce where the purpose of such shipment is to place the animal on loan to another individual or institution. If the receiver later obtains a permit under the Act, the animal may be legally purchased by the receiver at the time he receives the permit.

(2) An endangered animal may be shipped in interstate commerce where the purpose of such shipment is to make a *bona fide* gift to another individual or agency without any assurance of any gain or profit by barter, credit, or any other form of compensation whatsoever. This is permissible even if at some future time in a totally unrelated transaction the original receiver ships a different animal to the original donor as a gift, and again there has been no assurance of any gain or profit by barter, credit, or any other form of compensation. This must be, however, two separate transactions neither of which took place in the course of a commercial activity.

(3) Endangered species may be advertised for sale provided such advertisement contains a caveat that no sale may be consummated until such time as the purchaser has obtained a valid endangered species permit from the U.S. Fish and Wildlife Service.

## PERMITS

For an endangered species covered by the Act a person must have a valid permit in order to engage in an activity which is prohibited. Permits may only be issued for scientific purposes or to enhance the propagation or survival of the affected species. No permits may be issued for purely public display purposes. In addition, certain transactions may qualify for a permit under the economic hardship provisions of the Act, however, this only applies to newly listed species.

Permit applications should be submitted in accordance with Federal regulations contained in 50 CFR Parts 13 and 17. New regulations are being developed, but in the interim you may refer to those regulations in Part 17 designed for the previous Endangered Species Conservation Act of 1969. Until final regulations are implemented, it will provide guidance as to the nature of the information required.

Applications and correspondence regarding permits should be submitted to the Director (FWS/LE), U.S. Fish and Wildlife Service, Washington, D.C. 20240. Phone inquiries may be made on 202-343-9242 or 202-343-9237.

Permit applications must be complete in order to be processed. In addition, permit applications must be published in the *Federal Register*, and public comment invited for 30 days. Therefore, it takes approximately 60 days to process an application and issue a permit once a complete application has been received by the Service. In some cases, a longer time period is required.

In order to offset the administrative expense entailed in the consideration and issuance of permits, a \$50 permit fee must be submitted for endangered species permits.

Who should apply for the permit? Where the situation is a multi-party transaction, and all of the parties are within the jurisdiction of the United States, the certified application must come from the party who is going to utilize or purchase the animal. If a permit is issued for the transaction the authorization within the permit will name the seller as authorized to sell and to ship in interstate commerce the animal which is the subject of the permit. This avoids unnecessary duplication of permits. In the export situation, we will only accept applications from the party within our jurisdiction, that is, the exporter. The exporter is required to provide all such information from the foreign party as is deemed necessary to make a judgment on the issuance of the permit. Because of the possible complication of checking information from foreign sources, the processing of applications for export transactions may take substantially longer than a normal permit.

NOTE:—Meeting the requirements outlined by this fact sheet does not alleviate any person from observing other requirements or restrictions on wildlife under Federal, State, or local law. For further information on Federal laws and regulations, write to the Director (FWS/LE), U.S. Fish and Wildlife Service, Washington, D.C. 20240.

Mr. LEGGETT. Our next witness is Mr. Charles Bieler, director, San Diego Zoo and San Diego Wild Animal Park.

**STATEMENT OF CHARLES L. BIELER, DIRECTOR, SAN DIEGO ZOO  
AND SAN DIEGO WILD ANIMAL PARK**

Mr. BIELER. Mr. Chairman, members of the committee, I appreciate the invitation to appear here today. My name is Charles Bieler. I am director of the Zoological Society of San Diego, which manages the San Diego Zoological Garden and the San Diego Wild Animal Park—hereinafter collectively referred to as the San Diego Zoo. Both the Zoological Society and I, personally, are members of the American Association of Zoological Parks and Aquariums.

The San Diego Zoo is fortunate to enjoy the reputation of being among the foremost zoological organizations in the world. We also are fortunate in being able to afford to employ sufficient administrative personnel to handle the increased load of paperwork required as the result of increased federal regulation over the past few years. In fact, we now have one full-time employee on our payroll who does nothing but prepare permit applications and other documentation required by applicable government law, rules, and regulations.

As you have heard earlier today, the Endangered Species Act of 1973—the act—in many respects is an outgrowth of policies on endangered species adopted by the AAZPA in the mid-1960's. The zoos of the United States concur in the primary purpose of the act—to protect the rare animals of the world. What I will address today is the problems we have encountered with the way in which the act has been implemented.

**1. CAPTIVE-BORN POPULATIONS**

You will be hearing from other speakers about the serious problems encountered by “public” as well as “commercial” organizations in moving, even within the zoological community, captive born specimens of endangered species. Suffice it for me to say that captive stocks of certain endangered species are stable and reproducing; e.g., Siberian tigers; and many species of birds which, because of their successful breeding in captive collections, especially private collections, such as Turquoise parakeet, Scarlet-chested parakeet, Hume's bar-tailed pheasant, Brown-eared pheasant, Edward's pheasant, Mikado pheasant, and Swinhoe pheasant should be removed from the list, or down-listed to allow their sale. Interior should permit transfer of these captive populations without detailed, individual permit applications being required.

At a minimum, a simplified procedure for permits to move endangered species already in the United States should be available. We believe it the height of folly that it takes the same permit to move a zoo-born gorilla from, say San Diego, to Cincinnati, as to import a wild-bred animal from the Cameroons to San Diego. Plainly, USDI could correct this situation.

**2. COMPLEXITY OF PERMIT REQUIREMENTS**

Our experience is that USDI's requirements for permit applications are too detailed and lengthy. For example, applications are

required to contain: complete description of facilities; detailed description of shipping container and procedures—airlines, flight numbers, et cetera—detailed description of all mortalities during the 5 years preceding application of this species, genus, or family, to include causes, steps taken to avoid or decrease such mortalities; full statement of reasons why applicant is justified in obtaining the permit—this part has four subsections and requires many pages to fully explain.

As if this were not enough, the Tuesday, May 20, 1975, Federal Register contained USDI-proposed amendments to permit provisions. Expensive and time-consuming requirements in these proposals including a "résumé of the applicant's attempts to obtain the wildlife sought to be covered by the permit in a manner which would not cause the death or removal from the wild of such wildlife"; and a "brief résumé of the technical expertise of the persons who will care for such wildlife, including any experience the applicant or his personnel have had in raising, caring for, and propagating similar wildlife, or any closely related wildlife." Is it necessary for a zoological institution to include such a résumé for each application? It would save us a lot if we could send in only additions or changes. For example, we have had the same curator for a number of years but we are getting a new veterinarian. The curator's résumé would not have to be put in, but the new veterinarian's would. The proposal further says:

In addition to any reporting requirements contained in the permit itself, the permittee shall also submit to the Director a written report of his activities pursuant to the permit. Such report must be postmarked or actually delivered no later than 10 days after completion of the activity.

What is USDI going to do with all the papers it receives? Why must all of this documentation be required?

To complicate matters, certain marine mammals—such as the dugong, manatee, monk seal, many whales—are included not only on the endangered species list but also the Department of Commerce's Marine Mammal Protection Act list. Although there have been some moves to put them all under the endangered species application, as far as we know, these animals now require two very lengthy permit applications to two separate departments. The permits under both statutes are very similar. This is an expensive and time-consuming procedure for the applicant and the Government. A third Federal agency, the Agriculture Department, is also involved with quarantinable mammals, birds, and reptiles. Such elaborate and duplicative procedures seem unnecessary for interzoo transactions.

Assuming that an institution submits permits, acquires stock, and breeds the species in a conservation program, why is it necessary to obtain more permits to surplus out the offspring? This encumbrance precludes many institutions from engaging in breeding programs of endangered species—or practicing birth control—thereby defeating an objective for which the law was intended.

The timelag between submitting applications to two separate Federal agencies, publishing a USDI application in the Federal Register, lining up quarantine space and making arrangements with foreign contacts—when the birds are coming from overseas—often negates a transaction taking place.

We, as a large institution, have encountered serious problems in moving our surplus animals. You can imagine the problems encountered at the smaller zoos in the United States which do not have the administrative staff to devote to the paperwork. You should also bear in mind that even an institution such as ours uses services of zoological animal suppliers; of course, the smaller zoos are greater users of their services. The distinctions in the administration of the act between commercial and noncommercial movement of animals has imposed very serious hardships and reduced the ability of zoos to use the valuable services provided by zoological animal suppliers.

### 3. ANIMALS IMPORTED UNDER THE 1969 ACT

A peculiar problem we have encountered concerns animals imported some years ago pursuant to permits issued under the endangered Species Act of 1969. A permit the Gladys Porter Zoo, Brownsville, Tex., obtained under the 1969 act to import douc langurs, a monkey from Indochina, imposed a requirement that a further permit be obtained for transfer of the animals. The Gladys Porter Zoo wishes to lend these animals to the San Diego Zoo—a transaction which would be allowed without a permit under Interior's present interim policy were it not for the 1969 act permit conditions. We believe that Interior's interim policy, as well as any regulations that finally are published should apply equally to all animals in captivity in the United States.

### 4. LIVE VS. DEAD ANIMALS

In its processing of permit applications, we believe the Interior Department should give priority to processing applications to move or import live specimens of endangered species. These requirements should be given priority over permit requests to move skins or meat products.

### CONCLUSIONS

These are some of the problems we have encountered at the San Diego Zoo.

We would like to emphasize that the San Diego Zoo fully supports the intent of the Endangered Species Act of 1973, but we also support the concept of self-control and of self-government because we believe, with few exceptions, the responsible zoos of today have initiated and led conservation programs rather than contributing to the demise of certain species. We feel these efforts should be supported and not restricted by oppressive legislation.

Thank you.

Mr. Chairman, I would like to say, I would like to add to my statement and to reemphasize what the Congressman from Minnesota already said: The biggest problem is the cumbersome procedure of applying, and the San Diego Zoo is probably one of the more affluent zoos in the AAZPA.

Three or 4 years ago we could afford to hire a man to read the Federal Register on a daily basis, and to monitor the laws being passed, but I do not know that we will be able to continue to do that in the future.

What we are doing—I have not reviewed the changes in the application requirements as they come out last Friday. I would like to look at those and see how they will effect us. But there is a tremendous expense in submitting, every time you submit for a transfer of an endangered species in the United States, that you are to send a biography on your curator, a biography on your veterinarians, a biography on your facilities.

If those could be maintained there once and recorded there once, it would be more satisfactory.

Mr. LEGGETT. Mr. Baysinger, why is not filing once adequate?

Mr. BAYSINGER. Mr. Chairman, that also is not within my sphere.

Mr. BIELER. Another item, I bring this up, the typical example, the Congressman from Texas brought up the problem of the Gladys Porter Zoo in Texas. This is an area in my standing. Mr. Chairman, we are trying to bring in from Gladys Porter four animals for breeding in the San Diego Zoo.

Those four females come in under the auspices of the act in 1969, which required that if they had to be moved from Gladys Porter, a permit would be required.

The act of 1973 has not superseded this.

We have one male animal, and now we are having to go through the total application procedure to bring these four females in from Gladys Porter just on loan for breeding. These are some of the problems.

Mr. LEGGETT. Those animals you are talking about, I see them mentioned in your statement here, which you had mentioned before. I do not know exactly what they are.

Anyway, we do appreciate your comments.

Mr. BIELER. Mr. Chairman, we do appreciate the opportunity to be here.

Mr. LEGGETT. We thank you, gentlemen.

Let me ask you, this animal, is it a monkey from Indochina; have I got it correct?

Mr. BIELER. That is correct.

Mr. LEGGETT. We are going to make this act workable, and we appreciate the work of the San Diego Zoo, and of your presence here. You come from an outstanding State, I might say.

Mr. BIELER. I would have to concur with that, sir.

Mr. LEGGETT. We are going to need your help to carry through with these regulations. We have a difficult time, and sometimes we get too much stuff, sometimes we do not get enough.

Mr. BIELER. The problem, sir, we in the San Diego Zoo, or in other zoos, nonprofit, they are not really city supported, they cannot go back to the Congress for additional funds, to finance these things, so we have to find the money to do it.

That is why we are screaming, really.

Mr. LEGGETT. How much does it cost you estimate to comply with the Federal law.

Mr. BIELER. I imagine it is probably costing me two full men, that will be probably a random estimate, I think it may be \$20 thousand a year.

Mr. LEGGETT. Ok. Very good.

Mr. Oberstar?

Mr. OBERSTAR. No questions.

Mr. LEGGETT. Thank you very much. I might say, if anybody has trouble working with the bureaucracy, until we get things smoothed out, I hope you will keep the committee precisely apprised of the problems.

I do not mean to file each application with us, but please let us know what is going on, because we want to know.

We thank you, gentlemen.

Mr. LEGGETT. Our next witness is Mr. Tom Hunt, president of the Zoological Animal Suppliers Association.

### **STATEMENT OF TOM HUNT, PRESIDENT, ZOOLOGICAL ANIMAL SUPPLIERS ASSOCIATION**

Mr. HUNT. My name is Tom Hunt. I am president of the Zoological Animal Suppliers. The members of our group are Ark Animal Exchange; Charles P. Chase Co., Inc.; International Animal Exchange, Inc.—of which I am a vice president—Jurgen Schulz; Southwick Birds and Animals; Vivo Animales, Inc.; Western Zoological Supply; and F. J. Zeehandelaer, Inc. All members of our group are also members of the American Association of Zoological Parks and Aquariums.

The members of our group, according to best estimates in the industry, have handled approximately 85 percent of all zoological animal purchases, exports, imports and exchanges. This has been due to the highly specialized expertise that is required to locate, collect, and arrange for the transportation of zoological animals. The great bulk of the zoos in the United States could not, we believe, continue long in existence without our services. The nature of our business is such that we normally act as dealers. We usually have title to the animals we deal in. We generally do not act as agents for zoos and others or as brokers.

We have found that the Government agency enforcing and administering the Endangered Species Act views us as evil because we make our living in this specialized field. I am sure you are aware of Assistant Secretary Reed's characterization of animal suppliers as the "dregs of society." We believe that this predisposition toward us is unfortunate, as well as erroneous.

We perform important and valuable services for the zoological institutions—both noncommercial and commercial—in the United States. We have in the past assisted zoos not only in acquiring specimens but also in placing them in other facilities. Many animals have been bred in the United States in sufficiently large quantities to create a surplus of supply here. In the past, we used to export significant numbers of animals to zoological organizations outside the United States. But since enactment of the Endangered Species Act, these surplus animals cannot be moved without permits. And you have already heard from other speakers of the problems in obtaining such permits.

A recent example I can give you is the case of a foreign client of International Animal Exchange that asked us to supply 24 leopards to establish a nucleus breeding group of leopards on a large farm in a country in West Africa. Leopards are producing very well in U.S. zoos, yet are endangered in some parts of their native Eastern and Southern Africa. Because of all the redtape involved

with endangered species, we are prevented from becoming involved in a commercial transaction exporting these animals. The "bottom line" is that many zoos, because they now have no alternative means of disposing of their surplus leopards have stopped breeding this endangered species. How does that possibly benefit this endangered species?

For the past several years, I have had the opportunity to visit west and east Africa approximately 45 days each year. During this time, I have met with most of the leading animal suppliers for the purpose of procuring animals for our clients primarily in the United States. We have experienced more regulation during the past 24 months than in all our previous 15 years in business resulting in a decline in our business. Much of the difficulty we face today is a result of pressures by special interest groups without full knowledge of the real problems with wildlife and its management in its natural habitat.

As recently as February 1975, I returned to an area in east Africa near Nanyki, Kenya where each previous year I saw 50 to 100 grevy zebra and on this recent trip after 3 days I could find none. This, I believe, is a direct result of the people moving onto the land for farming purposes. This example could be repeated many times with many different species.

We also have serious concern with the distinction made under the act between animals in captivity on December 28, 1973, at a nonprofit institution compared with those at a commercial facility. The former are exempt from the act; the later are not. There are many commercial zoological organizations in this country of the highest standards of professionalism. Commercial zoos have recently, for example, been successful in breeding cheetahs, heretofore, a rare occurrence. These commercial zoos are discouraged from continuing these efforts because of the impossible or near impossible means of even shipping their animals or the offspring.

Our conservative estimate is that there are upwards of 300 surplus endangered species located in zoos and zoologically oriented parks in the United States. Limitations on disposition of these animals has resulted in zoos all but stopping many of their breeding programs. I cannot emphasize enough the importance of relaxing the regulations so that we, the zoological animal suppliers, can continue to perform a service for the zoological community.

In closing, I would like to make one final point. Some of our members have recently had contact with the appropriate Government agency in Canada that considers permits for endangered species. The processing time has been only approximately 3 days. We do not suggest that that should be the processing time by the Department of the Interior. But certainly our Government can improve substantially its processing time.

Thank you for this opportunity to be here today.

Mr. LEGGETT. Thank you very much, Mr. Hunt. Where is your home office?

Mr. HUNT. I am based in Michigan.

Mr. LEGGETT. OK.

Mr. Oberstar?

Mr. OBERSTAR. I have no questions.

Mr. LEGGETT. Very good. I think that is satisfactory. Thank you very much.

Mr. HUNT. Thank you.

Mr. LEGGETT. Our next witness is Mr. Frank Todd, curator of birds, Seaworld, Inc.

**STATEMENT OF FRANK TODD, CURATOR OF BIRDS, SEAWORLD, INC.**

Mr. Todd. Thank you for this opportunity to appear here today. I am Frank S. Todd. I am corporate curatory of birds for Seaworld, Inc. I am an ornithologist and have been in my present position for 3 years. For 8 years prior to that I was curator of birds at the Los Angeles Zoological Park.

Seaworld is a member of the American Association of Zoological Parks and Aquariums as well as the Zoological Action Committee, Inc. Our institution has public facilities at San Diego, Calif.; Aurora, Ohio; and Orlando, Fla.

Mr. Chairman, I am deviating from my written statement somewhat. Most of the endangered species of birds are in the hands of private aviculturists. This is because, particularly in the case of pheasants, that exhibition of these animals and breeding of them is not necessarily compatible. It is very difficult to accomplish both at the same time.

Speaking for the private individuals, and when we talk about private individuals, please do not misunderstand me, we are not talking about pet owners, people that keep a parrot or something of this sort as a pet, but rather we are talking about qualified breeders.

Speaking collectively, we applaud the intent of the Endangered Species Act, we support the intent of this act.

We are only disenchanted with the final wording, the interpretation, the ultimate interpretation. Even though the intent of the act may be beneficial, and we believe long overdue, and I do believe from the standpoint of the animals themselves, that it indeed has been detrimental.

It is interesting to note that by the time it was finally passed, worked over by all of the different parties involved it became a quagmire of confusion, and that a battery of lawyers were required to interpret what it said.

Even today, almost 2 years after it became law, we are unable to obtain straight answers from Washington regarding certain aspects of the act.

If we call a single office in Washington, the Interior Department, the Office of Endangered Species, and we talk to three different individuals, inevitably we receive three totally different answers.

We therefore do not feel that the law, the way it is being interpreted is in the best interest of the animals concerned, and I think this is the most important thing we have to keep in mind, and in as much as the bill was developed to protect the endangered species, it would seem reasonable then that the bill would provide provisions to allow us to do that.

It is totally unnecessary in my opinion, and unrealistic to consider endangered captive exotic animals, in the act, because their existence here has bearing whatsoever on the status of the population



in the wild. Therefore, the fact that Interior has control over these animals in the United States, is in no way, in my opinion, going to help this group of animals that we call endangered species.

I would suggest that the effect of such a philosophy of trying to control by permit these animals that are already occur within the United States has, in fact, been counter productive.

The thousands of individuals who have for many years been diligently working with endangered species, not only in public zoological institutions but many private individuals as well, were concerned about the plight of many of these animals long before the Federal Government displayed any interest. For years they have been busy breeding large numbers of endangered species to the point that in many cases, more of them occur in captivity than do in the wild. These are the diligent people that are doing the most good. Their actions and successes speak louder than their words. The work that they are involved in is often thankless and frustrating. Quite frequently, particularly in the case of the many private aviculturists, the work has been accomplished at great personal expense and sacrifice. We strongly question the motives and expertise of the Government at this late date emerging as the all-knowing expert. For many years the dedicated breeders toiled alone, without help of any kind from either the Government or the so-called expert protectionists. The Government expressed no desire to assist these many hard-working people in anyway whatsoever. The fact that the Government was not interested in the plight of exotic endangered species did not deter them and they continued with their good work because of their great love for wildlife and because what they were doing was essential. The skills of an accomplished propagator are not gained from books and they are not acquired overnight. Many many years of hard work are required, and that alone should illustrate the dedication involved. The breeding of endangered species is not a haphazard operation, rather it is a highly sophisticated science. The Government should be encouraging these skilled specialists. Unfortunately, just the opposite is the case.

The Federal Government has conjured up so many bureaucratic roadblocks that all of the good that has been accomplished all these years could be lost. The unwarranted cumbersome permit procedures are such that more time is spent filling out permit requests and complying with unnecessary regulations than maintaining and raising the animals involved. Perhaps by itself the difficulties of the Endangered Species Act are not insurmountable, but when combined with the tremendous amount of other recent animal-oriented legislation, the problems and time involved are staggering. The frustrations associated with the importation of a single pair of birds from Canada might serve to illustrate the situation. Laysan teal are tiny ducks that occur on Laysan Island in the mid-Pacific. They are considered to be an endangered species. If a qualified propagator wanted to import a pair raised by a fellow breeder in Canada, the following procedure would be required. First an endangered species permit from USDI must be obtained. This could take months and usually does. Then an avian import permit from USDA is necessary. Next quarantine space must be secured in a USDA approved quarantine station. This also may require many months. Then the birds must survive the rigors of quarantine. While in quarantine

they must not even be exposed to anything such as VVND. If so, all animals in the quarantine station are killed. By now, of course, the birds may have died of senility. Assuming that they have not and are at last legally imported and breeding is ultimately achieved, yet another endangered species permit is required for each of the offspring to be surplused. Interestingly enough, if USDI had its way, still another import permit would have been required—an injurious species permit. In addition to everything else, there is talk of a Federal zoo control bill which would require Federal experts to inspect and license a facility for a given species to be sure that the recipient is qualified for that species. All of this for a \$20 pair of birds.

Laysan teal are merely small, dull-colored degenerate mallards. They are not in the least bit attractive. Indeed, they are more trouble than they are worth. The only reason that we work with them, and many other species as well, is because they are truly endangered and we feel that as custodians of nature we have certain obligations. We take this very seriously and the responsibility is awesome. But clearly, considering the amount of Federal harassment heaped upon the dedicated people trying to actively do something constructive, this philosophy will rapidly alter. Indeed, it already has and many highly qualified breeders are terminating their activities with endangered species because they cannot continually cope with this type of needless pressure. As a consequence, they are not longer going to raise or even maintain Laysan teal. It will then be only a matter of time before the poor little Laysan teal passes from the scene compliments of the Federal Government.

Many endangered species in captivity are already being separated to prevent breeding because of the permit problems. These range from the aforementioned Laysan teal to tigers. Many animals have been neutered to prevent breeding. We repeatedly hear from Washington that there is really little cost or paperwork involved. One only has to apply for a permit once to see the fallacy of that contention. Washington acknowledges that there are problems with some of the legislation and they are moving rapidly to solve these problems. The fact that they said this almost 2 years ago with respect to the Endangered Species Act should serve to illustrate how our definition of time, cost, and paperwork differs from theirs. Zoos and private propagators are being strangled by needless bureaucratic redtape and there is no end in sight. Interestingly then, these dedicated breeders have become, not unlike their charges, an endangered species.

Tragically, there are many bona fide endangered species within the borders of the United States. The Government does not have to become involved with captive exotic endangered species to justify the Endangered Species Act. Certainly the plights of the Santa Cruz long-toed salamander, California condor, tule elk, bald eagle, and the black-footed ferret to list but a few are just as real as those of the exotic Laysan teal and Bengal tiger. If the energy directed toward setting up and maintaining a permit office and cumbersome permit procedures were channeled toward some of the real domestic problems, who knows, maybe some real good could be accomplished. The creation of a large division to process needless permits is nothing more than the emergence of yet another bureaucratic

dynasty, not to mention the numerous taxpayers dollars required to operate such a kingdom.

Now that the law has been effective for almost 2 years we have a unique opportunity to reflect on its effectiveness and hopefully can get involved in the mechanics required to change it where necessary. Quite possibly, these oversight hearings will bring out the obvious inequities of the act. We suggest that with respect to captive populations of endangered species within the United States that the law has been detrimental. In fact, it has done far more harm than good. We further contend that the U.S. Government should not be in the business of trying to regulate those endangered species already in the country. These animals should not be covered under the act. Whatever is being done with them in the United States could not possibly have an effect on the wild population. Therefore, their presence in this country is immaterial. We strongly feel that if the Endangered Species Act procedures continue as they have in the past that there is no question that a number of endangered species will suffer as a consequence. Millions of species of animals have come and gone since this planet was created. They disappeared for a wide variety of reasons. However, no matter how thoughtless man has been in the past, he has never been presumptuous enough to legislate any out of existence. Unfortunately, we are very close to seeing that happen now. It is ironic that something termed the Endangered Species Act is largely responsible. I suggest that this is indeed a very sad commentary on our troubled times. Thank you.

Mr. LEGGETT. I take it you have some question about the workability of the act?

Mr. TODD. I do.

Mr. LEGGETT. You should not have to do that exercise, but do you have faith?

Mr. TODD. It is being tested.

Mr. LEGGETT. I am not going to assure you, because you will worry about it if I do.

Mr. OBERSTAR. Do you see that the problems you have been confronting as arising directly out of the act, or out of the regulations?

Mr. TODD. Sir, I see the problems arising out of both. It seems to me, and maybe I am naive, I don't live in Washington—you have to live a specific lifestyle to live here—that after an act has been in effect for 2 years and we constantly ask questions, we ought to be able to get an answer. If you talk to people in the same office, you would think after 2 years you ought to be able to get some sort of continuity in terms of answers. We do not see that. I would suggest that is not a problem with the act. I would suggest it is a problem, possibly, with the personnel involved.

Mr. OBERSTAR. I might say a footnote to your comment, not many people do live in Washington. We exist here.

I wanted to ask if you have the same problem of reverse migration as cited by Mr. Hunt of the Zoological Animal Suppliers in reference to leopards, where they bring a group of leopards back to Africa to supplement breeding stocks there, and are prevented by regulations? Do you have that problem with birds?

Mr. TODD. Yes, in some respects, although it is a problem that is academic because we have not become involved for a number of reasons, some of which were touched upon by Mr. Steele. One of the

big problems with captive animals in returning them to the wild is the fact that the habitat has to be suitable for returning them. In other words, it has to be restored to its former condition prior to being available, as it were, for these surplus animals. In addition to that, we have problems with behavior. The animals then have to be conditioned to go back to the wild.

One of the most successful programs we have been involved in, and interestingly enough, Fish and Wildlife Service has been instrumental in many respects on this particular program, as have many, many zoos and the State government of Hawaii, is the restoration of the Hawaiian goose back to Hawaii. That program has been ongoing for many, many years. Only within the last 3 years do we begin to see some very positive signs that it is in fact working.

When we talk about a restoration program, it is not a matter of getting a boxcar, loading up 50 tigers and sending them back to India and setting them loose. We are talking about social problems, and the government involved has to concur and assist. Most of all, one of the factors many people overlook, we are talking about something that is tremendously long term. Whenever you have a long-term project like that, it is very, very expensive.

Mr. OBERSTAR. Are there any endangered species of birds that exist only in captivity, where their natural habitat no longer exists?

Mr. TODD. Not quite. There are some that are very, very close. The ayson teal is a very good example because Layson Island is a little over 700 acres. If man had never gone to Layson Island—keeping in mind that the island never had a large population of these birds to begin with—if man had never touched the island, they probably would have done fine. But when we first went to Layson and introduced rabbits, not predators, just rabbits, they ate off all the vegetation which totally altered the ecosystem of that particular land. The population of ducks on Layson Island fluctuates between 15 individuals and 600, and they have peaks and valleys. I would not say that we have any birds in captivity that do not exist in the world. I would suggest we are very close in some instances. Some pheasants in some instances might fall in that category, very common in captivity, but rare in the wild.

Mr. OBERSTAR. There are adjustment problems in reverse migration that the Government should not be adding to them with additional paperwork?

Mr. TODD. Yes, sir.

Mr. OBERSTAR. If you have any suggestions of changes in the law as you have read it, if you have bothered to read it, and there is no reason you should be bothered to, any suggestion of changes in the regulations we would be very grateful to have your input.

Mr. TODD. You mean the new regulations just published on Friday? Yes, I think I stated that in here. I am suggesting that whether an animal is self-sustaining in captivity or not, if it is an endangered species, it is immaterial if it already occurs in the United States.

Mr. OBERSTAR. But I am saying that any other suggestions you may have, we would be glad to have.

Thank you.

Mr. LEGGETT. Thank you very much.

Our last two witnesses will be Mr. Destry Jarvis, National Parks and Conservation Association, and Mr. Milton Kaufmann, U.S. Air Force, colonel, retired, of Let Live.

**STATEMENT OF DESTRY JARVIS, ADMINISTRATIVE ASSISTANT FOR  
PARKS AND CONSERVATION, NATIONAL PARKS AND CONSER-  
VATION ASSOCIATION**

Mr. JARVIS. I am T. Destry Jarvis, administrative assistant for parks and conservation of the National Parks and Conservation Association, 1701 18th Street NW., Washington, D.C. 20009. NPCA is a national conservation organization of nearly 50,000 members dedicated to preservation of the national park system and of the whole environment. We appreciate the invitation to present our views on the implementation and administration of the Endangered Species Act of 1973.

NPCA has been involved in efforts to preserve and restore endangered species of plants and animals for many years. Since January 1970, NPCA has published an endangered species article each month in the National Parks and Conservation magazine, the Environmental Journal. A booklet of four articles on endangered plants reprinted from recent issues of our magazine is appended to my statement.

In addition to the publication of articles and news on endangered species, both animal and plant, NPCA was active in support of passage of the Endangered Species Act of 1973 through invited testimony. We served as a technical consultant to the convention, we have been active in monitoring the implementation of the act, commenting on proposed regulations, proposed listings and permit applications. We have several other programs in our office that involve endangered species.

Although NPCA maintains an active, day-to-day programmatic effort to seek protection for and restoration of endangered species of animals, and although NPCA is in accord with many of the comments which have and will be made for the record of these hearings with regard to the unnecessary, bureaucratic procrastination of the administration toward full, effective implementation of the Endangered Species Act, for the purpose of these oversight hearings, the balance of my statement will concentrate on the endangered plant provisions of the act and their implementation—or lack thereof—and improvement and ways in which the act can be improved and ways in which we feel the administration of the act can be improved for plants. The amazing thing is that although the act passed nearly 2 years ago and was signed into law, not a single plant species, or not a single kind of plant has been added to the endangered or threatened species list. In addition to that, although the convention was signed in 1973, in March, it was approved by the Senate in August of 1973 and entered into force in July of 1975 with 11 nations having ratified it. There are yet to be published any implementing regulations and the United States has yet to propose any plant or animal species for addition to the appendices. It wasn't until 6 days ago that the Interior Department published proposed rules for listing the plants and animals in appendix 1. I might point out there are no U.S. plants on appendix 1. The Smithsonian Institution under section 12 of the act prepared a report on endangered species of plants which

identified the fact that at least 10 percent of the plants in the United States should be protected by the act, in that they are in either the threatened or endangered or recently extinct category. These are over 2,000 species of which 100 may be extinct, 750 identified as endangered, and 1,200 as threatened. This total has been refined upward since the report was issued.

The report lists 72 kinds of cacti in the United States as endangered. Yet, not one has ever been proposed for endangered or threatened status.

Of over 2,200 species, subspecies, or varieties of plants in Hawaii, the report lists 1,088 kinds as threatened or endangered. This figure represents nearly 50 percent of the native Hawaiian plants. However, Dr. F. Raymond Fosberg, the curator of botany for the Museum of Natural History and an expert on the plants of Hawaii, claims that "70 percent of Hawaii's species of plants are in danger of extinction." Yet not a single Hawaiian plant species has even been proposed for the endangered or threatened lists.

In addition to its general list of threatened and endangered plants in the United States and the specific list for Hawaii the Smithsonian report separates out a list of 77 plants which are commercially exploited in the continental United States. Yet once again, no plants from the list of commercially exploited species have even been proposed for the official endangered or threatened lists.

The administration has published in the Federal Register a notice of review of the entire Smithsonian list of plants. We feel this list, with the very extensive research the Smithsonian Institution put into that report, constitutes a sufficient body of data that those plants should all, and the list in its entirety, be proposed for listing and then reviewed, not published as a notice of review and then spend many months deciding whether they should be proposed. Part of this problem we feel is due to budgetary and personnel restrictions within the Fish and Wildlife Service. There are only two botanists in the Office of Endangered Species. They may be the only botanists in the entire Fish and Wildlife Service. They may have some in the field, but they have only two that concentrate on endangered species. They have none in their regional offices. We feel this is a major gap in the personnel of the Office of Endangered Species. In addition to the administrative problems that we have with the act, there are a number of inadequacies in the act itself as far as plants are concerned, it gives unequal treatment to plants. It gives preferential treatment to animals. The Smithsonian report identified preservation of plant habitat as the most critical need. Yet there is no provision in the act, once a plant was listed, although none have been, but once plant is listed, there is no provision for protection of plant habitat.

You cannot create plant refuges, there is no management provision for the Federal Government, not even provision for cooperative agreements, at least not to the extent that can be entered into for animals. We feel these things are necessary. The definition in the act of species does not include plants down to the lowest level, including population segments or varieties as it does for animals. The provisions for emergency determinations do not extend to plants. There are certainly just as likely to be emergency situations for plants as for animals. There is very little land acquisition provision in the act for plants. I mentioned cooperative agreements already. They

are not addressed towards plants. Foreign programs are not equally addressed to plants in the act. I think probably the foremost problem with this is that the prohibited acts section of the act does not prohibit taking of plants, although it does refer to prohibition on interstate commerce in plants. It does not address the issue of physical taking as it does for animals. In conclusion, I would say that although plants are in the act, the Administration has been slow to act to prevent the list of recently extinct plants from growing. We see this as a critical problem and hope the committee can address this either in its comments to the Administration or in reflecting upon possible amendment to the act.

Thank you.

Mr. LEGGETT. Thank you. Have you filed a petition on some of these plants?

Mr. JARVIS. No, my organization has not.

Mr. MANNINA. Mr. Jarvis, representatives of the Department of the Interior have indicated the reason they are proceeding to review the report instead of listing the species contained in it is that they believe the Smithsonian report is not scientifically complete. You have indicated rather strong disagreement with that. Do you know of any representatives of the scientific community who have criticized the Smithsonian's report as being incomplete, scientifically inadequate or any methodology being improper?

Mr. JARVIS. No, I do not. In fact, some of the gentlemen who participated in the Smithsonian report, and I would have to refer to Dr. Raymond Fosberg, who I consider to be the greatest expert on Hawaiian plants in this country, did the work (and has for many years for Hawaiian plants) that went into the Smithsonian report. There was another question at this point, from counsel. I cannot imagine that they can, at least during a notice of review process—why not go head and propose these animals. Then you can specifically comment on each one or however you want to do it, but at least propose them for listing.

The basic data is available, contained in the Smithsonian report and their data cards for each individual species which they have made available to the Interior Department at the time the report was made available, or shortly thereafter.

Mr. MANNINA. Is it accurate to say that when the Interior Department conducts its review and solicits public comments it is going to solicit advice from the exact same people who compiled the report.

Mr. JARVIS. I would say that is true. There may be other research centers or botanists not directly consulted in the report, but they will have ample opportunity to do that during the review process.

Mr. LEGGETT. Thank you very much.

Your statement, Mr. Jarvis, will be placed in the record.

Mr. Kaufmann, your two page statement will appear also in our record.

[The prepared statements follow:]

#### STATEMENT OF T. DESTRY JARVIS

Mr. Chairman and other distinguished members of the subcommittee, I am T. Destry Jarvis, Administrative Assistant for Parks and Conservation of the National Parks and Conservation Association, 1701 18th Street, N.W., Washington, D.C. 20009. NPCA is a national conservation organization of nearly

50,000 members dedicated to preservation of the national park system and of the whole environment. We appreciate the invitation to present our views on the implementation and administration of the Endangered Species Act of 1973.

NPCA has been involved in efforts to preserve and restore endangered species of plants and animals for many years. Since January 1970, NPCA has published an endangered species article each month in the National Parks and Conservation Magazine: The Environmental Journal. A booklet of four articles on endangered plants reprinted from recent issues of our magazine is appended to my statement.

In addition to the publication of articles and news on endangered species, both animal and plant, NPCA was active in support of passage of the Endangered Species Act of 1973 through invited testimony; a member of the NPCA staff served as a technical consultant to the drafters of the Convention on International Trade in Endangered Species of Wild Fauna and Flora; NPCA has been continually active in monitoring the implementation of the Endangered Species Act of 1973, offering our comments on proposed regulations, proposed listings of species, and on permit applications to take endangered species; for a number of years, NPCA has encouraged the establishment and expansion of "seed banks" to preserve genetic plant resources; and NPCA is carrying out a modest, though somewhat unique, program seeking the discovery of a blight-resistant strain of American chestnut through natural selection (we have solicited, received, planted and are in the process of cultivating American chestnuts from all parts of the country on a farm in Maryland in a long term effort to discover a blight resistant strain).

Although NPCA maintains an active, day-to-day programmatic effort to seek protection for and restoration of endangered species of *animals*, and although NPCA is in accord with many of the comments which have and will be made for the record of these hearings with regard to the unnecessary, bureaucratic procrastination of the Administration toward full, effective implementation of the Endangered Species Act, for the purpose of these oversight hearings the balance of my statement will concentrate on the endangered *plant* provisions of the Act and their implementation (or lack thereof) and improvement.

The Endangered Species Act, enacted on December 28, 1973 as Public Law 93-205, provides the mechanism for listing and thus protecting endangered species of plants—yet to date, not a single species of plant has been added to the Endangered (or Threatened) Species Lists.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora was signed on March 3, 1973, approved by the U.S. Senate on August 3, 1973 and entered into force on July 1, 1975, with 11 nation's ratifications, yet the Administration has yet to publish implementing regulations or to add any of the plant species identified in either Appendix I or Appendix II of the Convention to our endangered species list or to take other protective action.

It was not until six days ago, September 26, 1975 that the Interior Department published *proposed* rules (40 FR 44329) for listing the species of plants and animals from Appendix I of the Convention. As the Federal Register notice indicates, even this late attention to Appendix I species came only as a result of pressure from an environmental group. It is also pertinent to point out that *none* of the plant species on Appendix I are native to the U.S.

Thus even if the review process for the Appendix I species takes only ninety days, which seems unlikely considering the past delays and procrastination which has characterized Administration attention to endangered species of plants, there will still be no plant species in the U.S. on the list, despite clear scientific evidence that as many as 10% of all plant species in the United States should be afforded the protection of the Endangered Species Act.

The Smithsonian Institute's "Report on Endangered and Threatened Plant Species of the United States," presented to the Congress on December 15, 1974 pursuant to Section 12 of the Endangered Species Act, clearly, scientifically and we believe definitively shows that about 2000 species, subspecies, and varieties of plants in the United States are (or were) in danger. Listed are nearly 100 recently extinct or possibly extinct plants. Also, about 750 plants are identified as endangered and 1200 as threatened. Some of these may be gone before action is taken.



The Report lists 72 species, subspecies, and varieties of *cacti* as endangered or threatened—over 30% of the *cacti* in the United States—yet not one has even been proposed for endangered or threatened status.

Of over 2200 species, subspecies, or varieties of plants in *Hawaii*, the Report lists 1088 kinds as threatened or endangered. This figure represents nearly 50% of the native Hawaiian plants. However, Dr. F. Raymond Fosberg, the curator of botany for the Museum of Natural History and an expert on the plants of Hawaii, claims that “70% of Hawaii’s species of plants are in danger of extinction.” Yet not a single Hawaiian plant species has even been proposed for the endangered or threatened lists.

In addition to its general list of threatened and endangered plants in the United States and the specific list for Hawaii, the Smithsonian report separates out a list of 77 plants which are *commercially exploited* in the Continental United States. Yet once again, no plants from the list of commercially exploited species have even been proposed for the official endangered or threatened lists. Awareness of the serious threat to plant species from commercial exploitation is heightened further when the report points out that their list is incomplete—actual comparison of commercial plant catalogs with the report’s lists of endangered and threatened species would result in a *much* higher list.

All that the Administration has done for endangered plants of the United States is to issue a notice of intent to *review* the status of over 3000 vascular plants. Even this notice of *review* did not appear in the Federal Register until July 1, 1975 (40 FR 27824), nearly seven months after the Smithsonian report was released.

Certainly, much of this delay and lack of attention to endangered plants by the Interior Department can be attributed to insufficient budgetary allocations and personnel for the Office of Endangered Species. At present, only two botanists work on plants for OES, and these two have only been on the job for a few months. If the large number of plants whose populations are reaching critically low levels are to be saved, a much larger commitment of personnel and funds must be brought to bear and major policy changes must be made—soon—before the too large list of “recently extinct” plants grows.

Another factor which has contributed to the Administration’s inattention to the endangered plant problem is that the Endangered Species Act of 1973 does not give the plant kingdom equal treatment. Of course Section 12 of the Act recognized this to a certain degree by requiring that the Smithsonian report provide *recommendations* to the Congress as to methods of adequately conserving endangered or threatened plant species. The Conference Report on S. 983 (December 19, 1973) in referring to Section 12 of the Act, states that . . . “it was felt that further efforts should be undertaken to ensure adequate controls upon interstate commerce in endangered species of plants . . .”

Recommendations of the Smithsonian report emphasize the urgent need to provide for preservation of *habitat* for endangered and threatened plants in their native condition.

The larger number of plants threatened with extinction in the United States and the immediate problem of providing critical habitat to help assure their survival necessitate the amendment of the Endangered Species Act of 1973 to make its protective provisions equally strong for plants as for animals.

There follows a discussion of the specific sections of the Act which need improvement to for plant protection.

Sec. 2(a)(5): This statement of findings should be expanded to include plants in state conservation programs, and providing for cooperative agreements to protect endangered plants. Plants are a part of our heritage, too.

Section 3(11): Limits the definition of “species” for plants down to the subspecies level only. This should be amended to include population segments in common spatial arrangement for plants as well as for animals.

Section 4(d): Amend to provide for protective regulations for plants on endangered or threatened list pursuant to the prohibition provisions of Sec. 9.

Section f(2)(B)(ii): The regulations for emergency determinations must be amended to cover plants as well as fish and wildlife. Certainly, emergency situations can occur for plants.

Section 5: Under present law, land acquisition for plant habitat can only be undertaken for plants on Appendices to the Convention. No U.S. plants have been added to the Convention, despite a clear need. The Smithsonian Report points out the urgent need for preservation of native plant habitat. The Act

should be amended to provide land acquisition authority for plants equivalent to that for animals.

Section 6: Provision should be made in the Act for State-Federal cooperative agreements for plants as well as animals.

Section 8: Encouragement of foreign programs in endangered species is limited to animals, but should be amended to include plants as well.

Section 9: There are major differences between acts prohibited for fish and wildlife and those prohibited for plants. Specifically, there is no *taking* prohibition for plants, only a prohibition on interstate commerce on commercial activity in listed plants. This should be altered since much of the decline in plant populations is due to destruction of habitat—only a portion, though, a significant one especially for cacti and orchids, is due to commercial exploitation.

In conclusion, although plants are included in the Endangered Species Act of 1973, the Administration has been slow to act to prevent the list of "recently extinct" species from growing. Recommendations in the report of the Smithsonian Institute should be heeded. The habitat destruction of the plants of Hawaii, the critically endangered group of cacti and other commercially exploited kinds of plants must be given immediate attention by the Administration. Congress can aid the plight of endangered plants by strengthening the provisions of the Act to give them equal treatment.

#### STATEMENT OF COLONEL MILTON M. KAUFMANN, USAF (RET.)

I am Milton M. Kaufmann, President of Let Live, a non-profit conservation organization concerned with the conservation of wildlife and President of Monitor, Inc., a consortium of environmental conservation, and animal welfare organizations dedicated to the conservation of marine mammals and the preservation of endangered and threatened species.

My involvement with the Endangered Species Act of 1973 began when I participated in discussions with congressional staff and conservation groups relative to the framing of the bill. I lobbied actively for its passage and consider it a milestone in the history of conservation in the U.S. and internationally. I also attended the Meeting of pleni-Potentiaries on the Endangered Species Convention held in Washington, D.C. in 1973, attempting to assist the U.S. Delegation through informal conversations with foreign delegates.

I am testifying today specifically for the following organizations affiliated with the Monitor Consortium who have been invited to testify before the Committee on wildlife conservation matters:

- American Littoral Society
- Chesapeake Chapter, American Littoral Society
- Committee for the Preservation of the Tule Elk
- Endangered Species Productions
- Environmental Policy Center
- Friends of the Earth
- Humane Society of the United States
- International Fund for Animal Welfare—U.S.A.

Virtually all Government and conservation witnesses who have testified at this oversight hearing have testified to the totally inadequate funding and the lack of adequate staff supporting the administration and enforcement of the Endangered Species Act and the Convention. We add our voices on the above point. We emphasize that the solution is to insure, through Congressional and Executive Branch actions, that adequate resources are made available. On our side, the environmental groups will lend full support to achieve this objective. The answer is not to seriously emasculate the Act by tailoring the law to match "available resources." The Act was admirably tailored to match the urgent problem of saving species from extinction. Endangered and threatened species simply cannot wait around until some distant date when funding will be available. The U.S. has been the world leader in saving endangered species. We will forfeit that leadership if we amend our national Endangered Species Act to address only "priority" endangered and threatened problems.

We recommend that the Act remain substantively unchanged. Congress did its work well in 1973. What is needed now is dedicated, imaginative leadership in the Departments of Interior and Commerce and adequate funding to match

the size and importance of the job. The Departments have approached this uniquely difficult and demanding responsibility with a typically bureaucratic attitude (inertia and buck passing). This job cannot be left to future Administrations and Congress. Preserving diversity of life on earth must be effectively pursued now on a major scale, both nationally and internationally.

The groups I represent support the major points made by spokesmen for Defenders of Wildlife, the Fund for Animals and the Society for Animal Protective Legislation. In the interest of time we will not repeat their recommendations.

Thank you for the privilege of addressing the distinguished members of this Committee.

### **STATEMENT OF COL. MILTON M. KAUFMANN, USAF (Retired)**

Mr. LEGGETT. As I read your statement you were satisfied with the act; you were unsatisfied with the funding; you are not satisfied with the administration of the act; and you opposed amendment to the act and hope the administration can be made to work.

Mr. KAUFMANN. Mr. Chairman, you are even more succinct than I was in my statement.

Mr. LEGGETT. You do not address yourself to the problems we have been presented with here today. Or do you think some of those problems should not be resolved and ought to remain?

Mr. KAUFMANN. Mr. Chairman, I think the most critical problem that has been identified during the 2 days of testimony has been the problem of the movement of captive wildlife within the United States, shipping from one zoo to another. The recently published regulations have addressed that problem, the concept that the Department of Interior will consider such stocks as threatened and will, in fact, be able to provide the necessary permits for the shipment.

Now, my feeling is that this should be given a chance to operate and see whether, in fact, this does work and is a solution. Our view, specifically, is that with streamlined procedures in the Department of Interior, with more efficient procedures, that it can be made to work. We would recommend strongly to you and your committee that the act not be opened up at this point for substantive changes. We think the act is too young. We certainly add our voices to the voices of all the other witnesses who feel that what we have witnessed in the Department of the Interior and Department of Commerce in the last 2 years is not a very happy example of Government operations. We hope that your having called these hearings, and your plan to again review where we are 3 months from now will have a very beneficial effect on the Government agencies concerned. I think this is the type of attention that is needed at this time, rather than attempting to amend the act. I would like, if I might, to add a word of caution about an amendment which would eliminate the publication in the Federal Register of permit applications. I think it is absolutely essential that the public have an opportunity to participate in the administration of this act. The consortium which I represent reads the Federal Register daily to review permit applications, and we would find it pretty difficult to do what we think is necessary in terms of contributing counsel to the Government agencies if we did not have this device available to us of knowing when permit applications have come in.

Mr. LEGGETT. Let me ask you this: What kinds of deleterious transfers have you been effective in avoiding?

Mr. KAUFMANN. I would not say we have had any success in that line, sir. But we feel that it is very important that we have this means of knowing what is happening in terms of the actual administration of the act.

Mr. LEGGETT. Would it be better to just publish a monthly list of permits that have been approved and save you going through thousands of pages of rather mundane things, most of which do not affect you?

Mr. KAUFMANN. This would be a review after the fact, sir. We feel it was the concept of the act, that the public should have an opportunity to make its views known during the actual Government attention on a specific permit request.

Mr. LEGGETT. If you transfer, say, from the San Diego zoo to the St. Louis zoo an animal, what possible involvement with the public could you have?

Mr. KAUFMANN. Sir, if there was in effect an efficient system of certification of the capability of a given zoo to humanely maintain animals, we would feel a lot easier on this point. You may recollect. I am not sure whether you were in the Chair or not when this was discussed earlier today, but the zoo people were talking about an accreditation program they are developing which they would police themselves. We applaud this. We feel there should still be very significant Government participation in an inspection and certification system. We have as members of the staff of the some 20 organizations in our consortium, people that are professional animal welfare specialists. They know of instances where, in their view, zoos have not humanely maintained animals. We feel it is our function to call this type of information to the attention of the responsible Federal agency.

Mr. LEGGETT. I think that is exactly true. There are a number of facilities that do not keep animals adequately. I am not positive that that is such a great Federal legislation or that we need to monitor every single transfer for the purposes of resolving problems that some of the individual inadequate facilities may have. I would hope the States would get into this a little more than they are.

I do not think we have the Federal personnel to do it. I do not think we can afford it.

Colonel KAUFMANN. We are well aware of the inadequacy of the numbers of Federal personnel. We have had the identical problem in the Marine Mammal Protection Act.

Mr. LEGGETT. There is nothing more disheartening than to see animals kept for either commercial or other kind of display purposes, kept inadequately. But I would suspect that probably the animals that I think are kept inadequately are not the ones that were really inadequately kept. I suppose it almost takes an expert to figure out what is good and proper care.

Colonel KAUFMANN. Certainly, I would agree with you, sir. There is a necessity for a system to be established so that we can be sure that these animals which are representatives of endangered and threatened species are adequately cared for. And I think that is the objective of the groups that I am speaking for. We certainly do not support the cumbersome, time-consuming procedures presently in effect. We would support those people who say they want it stream-

lined. I just want to be sure we do not be so responsive to the people we have heard from today who are in the business of exploiting animals, make their living by exploiting animals, that in the interest of expediting their business operations, that we lose sight of the welfare of these animals, preservation of these species.

Mr. LEGGETT. Of course, you use exploit in the broad sense rather than in the narrow sense?

Colonel KAUFMANN. I was using it in the sense of utilization of animals.

Mr. LEGGETT. Very good. Thank you very much. I think we have a good base for taking further action.

Colonel KAUFMANN. Thank you for the privilege of appearing before you, sir.

Mr. LEGGETT. The meeting is adjourned.

[Whereupon at 4:50 the hearing was adjourned.]

# ENDANGERED SPECIES OVERSIGHT

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MONDAY, OCTOBER 6, 1975

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON FISHERIES AND WILDLIFE  
CONSERVATION AND THE ENVIRONMENT OF THE  
COMMITTEE ON MERCHANT MARINE AND FISHERIES,  
*Washington, D.C.*

The subcommittee convened, pursuant to recess, at 10:17 a.m., in room 1334, Longworth House Office Building, Hon. Robert L. Leggett (chairman of the subcommittee) presiding.

Mr. LEGGETT. The meeting of the Subcommittee on the Oversight of the Endangered Species Act to the Fish and Wildlife Subcommittee will please come to order.

Today is the day when we had scheduled informal discussions with respect to the progress and recommendations we might make with respect to the oversight of the act, and modifications, implementations, et cetera.

Copies of the articles were published yesterday, and we need more time before we make any more legislative changes on any great piece of legislation.

With that in mind, I would like to invite the Honorables Lynn A. Greenwalt, Keith Schreiner, Richard Parsons, Jack Gehringer, and others to the table.

Gentlemen, nice to have you here today.

Counsel has assembled here a series of documents.

What are these?

Mr. SPENSLEY. These are questions that have been compiled from the testimony of the Government witnesses on Wednesday, and the questions that arose during the following testimony of witnesses on Thursday.

Mr. LEGGETT. OK. During the hearings so far, a number of questions have arisen, some recommendations have been made.

We have got a series of amendments suggested by the administration, and concerning the endangered species legislation.

We thought it might be worthwhile to informally go over some of the ideas that were presented, and get your off-the-cuff unofficial views, all, each jointly, or severally of you.

You have copies of these for the witnesses—why do we not make it easy—if you can read fast we will give you an opportunity to look it over.

The first question appears under section 3, definitions.

Please proceed.

**STATEMENT OF HON. LYNN A. GREENWALT, DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY KEITH SCHREINER, ASSOCIATE DIRECTOR, FEDERAL ASSISTANCE; RICHARD PARSONS, SPECIAL AGENT IN CHARGE, REGULATIONS AND RULES, DIVISION OF LAW ENFORCEMENT; JACK GEHRINGER, DEPUTY DIRECTOR, NATIONAL MARINE FISHERIES SERVICE, DEPARTMENT OF COMMERCE; RAY HUBLEY, CHIEF, DIVISION OF MARINE MAMMALS AND ENDANGERED SPECIES**

Mr. LEGGETT. The first question appears under section 3, definitions.

Under the recent regulations of September 26, 1975, "commercial activity" is defined as a "transfer in the pursuit of gain and profit" if a person sustains a loss in transfer of the species or receives the "market value" for such species transferred; is this a commercial activity within the meaning of the new regulations?

My offhand opinion would be that I would answer that question yes.

Mr. GREENWALT. Mr. Chairman, I think Mr. Parsons, our resident expert on these matters, to my left at the table, indicates that he agrees with you, and I will let him amplify on that to whatever degree he wishes.

Mr. PARSONS. The word "pursuit" is the key word.

We are not in business to have people make profits on these species. It is the seeking of profit that makes it a commercial activity.

So the answer is, if I understand the question correctly, yes, pursuit of gain and profit includes those cases where you do not make any money, or simply make the market value. It is the nature of the activity, not its degree of success.

Mr. LEGGETT. It is just like a regular business. It may turn out to be a nonprofit business. It was not planned that way, but it just worked out. It is still a commercial business.

Now, counsel.

Mr. SPENSLEY. Mr. Parsons, the reason for the question was that there are times when zoos with captive, sustained populations of animals may be in surplus, and the owner wishes to somehow rid himself of the extra animals.

Is there no way within that definition for him to transfer an animal to another person, and receive attendant expenses of shipping, et cetera, or some token amount of money, which one would ordinarily not classify as a profit.

It appears that the definition is broad enough that one might find some exceptions therein.

Mr. FORSYTHE. Would you yield, Skip?

Mr. SPENSLEY. Yes.

Mr. FORSYTHE. Mr. Chairman, a nonprofit zoo, for instance, which does not engage in breeding endangered or threatened species should be encouraged to do so and so should commercial organizations.

Mr. PARSONS. We have attempted to look at the problem of commercial activity in our regulations, and that is where that definition comes from.

We did not go any further than to define the nature of the activity. The things you are talking about may all be true, but I think you are aware for the law enforcement personnel in the field, these distinctions can become rather difficult to make.

We have not really given any thought to the kind of thing you are talking about. I think we drew the line at the point where the activities involved could be said to be a commercial type of activity, and those things which, in our estimation, such as the exhibition of animals, even though for profit, were not a commercial activity in the sense of actually dealing with the animal.

The rest I would assume is a matter of interpretation. I am not saying that we would be adverse to considering that kind of thing. I cannot really give you an answer now as to how we would come down, or whether we want to have a new regulation on that subject, or whether we would simply interpret it that way.

My feeling, and it is my offhand reaction which you have asked this morning, is that it is more appropriate to stay with the distinction that we have. That we are looking for a workable distinction, and this one serves it well.

I think if you take a look at the definition of commercial activity as now worded, and the concept of captive, self-sustaining populations of animals and classification of animals as threatened, as well as endangered, that the whole complexion of the situation has changed, and is changing. This will go a long way toward meeting the kinds of objections that your questions have arisen from.

Mr. LEGGETT. Let me ask you this: Why can we not have a provision relating to exchange of animals for breeding purposes, between certain approved institutions?

As I understand it, the zoological group does not as yet have a certification procedure, but were they to develop a certification procedure which could be marketed by Fish and Wildlife Service, why would it not be profitable to authorize the mere filing of a notice of transfer with the Fish and Wildlife Service, rather than going through a permit procedure, if the purposes are for breeding?

I presume that the offspring would have to be registered in an appropriate way, regardless.

Mr. PARSONS. That is essentially what the captive self-sustaining population would do.

I am not sure that everybody understands it, but I think it is fairly clear in the regulations, in that once an institution has a permit, the permit can be for a long term. It is not a transaction by transaction permit, which has been criticized in the past.

Mr. LEGGETT. I see.

Mr. PARSONS. Once an institution had a permit, and a similar institution had the similar permit, then the transfer of animals between institutions with permits would go on just as you described for those animals which qualify for treatment as captive, self-sustaining populations.

Mr. LEGGETT. Now, permits for a leopard, say, could you use it for a cheetah?

Mr. PARSONS. Well, the permits, as I envision them so far, would be broader than just for leopards. It is similar to the proposed regulations on injurious wildlife. An institution could get a permit for a variety of animals on which it had appropriate facilities. The



permit would then be good for 2 years, and would be renewable. The process of renewal is considerably less involved than the original permit process, though it too has been much simplified.

One of the conditions of the permit is that animals may only be transferred between permit holders so that once there are two or more permit holders, they may transfer between themselves.

Mr. LEGGETT. How about the situation where an institution like Barnum and Bailey Circus wants to transfer? Could they get the same kind of permit which would allow them to?

Mr. PARSONS. There is no restriction in the regulations as to who can qualify for a permit.

Mr. LEGGETT. Either a profit or nonprofit facility?

Mr. PARSONS. That is right. It depends on the facilities they have available, and the species that they are dealing with. It does not make any other distinction.

Mr. LEGGETT. Ok.

Well, that might clear up some of the problems.

Are these the regulations that come out the later part of September?

Mr. PARSONS. Yes, September 26th.

Mr. LEGGETT. Now, as incident to that transfer for breeding purposes, can any cash, quid pro quo, be exchanged.

Mr. PARSONS. There are no restrictions in the regulations on that, as I recall.

I cannot give you a definitive answer, but basically as long as the activity is one that is within the scope of the permit, we would not usually concern ourselves with whether money changes hands or not.

Mr. LEGGETT. Whether it is money, or a calf, or a kitten?

Mr. PARSONS. We presently have a policy that allows what we called breeding loans by the zoological community. We allow them to transfer animals, and obtain a proportion of the progeny in return, which in a sense could be called the barter transaction.

Mr. LEGGETT. All right.

Now, I might mention that if—there are those in the audience of limited numbers representing groups that want to address questions as we move along; if you would rise and identify yourself for our record, and ask the question, either of the Chair, or of the Service, it might facilitate our review.

If it gets out of hand, we will change the rules.

Now, how about the situation where, say, a zoo has a litter of endangered species, and say they can only utilize say five of the litter, and the litter is seven.

Is there any limitation at the present time against their destruction of two members of the litter?

Mr. PARSONS. That is an interesting question that I do not think anyone has actually resolved. The act prohibits taking—it does not make any distinction between captive animals and wild animals.

Yet we are aware, as everyone else is, that euthanasia is a practice that is carried on in zoos. Particularly with very sick or old animals that just cannot survive.

We do not have any regulation on the matter.

Mr. LEGGETT. Would that not be a fit and proper subject for you to legislate in?. To require first that every endangered species to be

registered, whether it is born, or taken, and then two, to require that before any animal is disposed of, a permit be obtained. You could exhaust those situations where some animals are disposed of because they cannot find homes for them.

In those situations it would allow the Service to get involved in finding homes for endangered animals.

Mr. PARSONS. I think it best for someone else to express the views of the Service as to whether or not it is capable of helping people find homes for endangered species that they do not have room for.

As far as the restrictions on zoos, the act, of course, restricts taking, and it restricts interstate commerce, and it restricts import and export.

There has never been a restriction on sale within the separate States, and we have been aware of many transactions where animals were sold within the same State without any permit. It simply was not prohibited by the act.

The captive self-sustaining concept will allow more flexibility in the case of animals which do breed very often. Those are the ones which will benefit the most by the concept. We anticipate no problems in this regard.

Mr. LEGGETT. I guess there will be no problem in advertising interstate that you have interstate sales of animals available. Then somebody could come into the State and make an intrastate sale and take the animal outside the State, I would presume.

Mr. PARSONS. We have a factsheet which will be attached to the statement which is being submitted for the record, which has been circulated among the AAZPA and other interested parties, that states our policy on advertisements. It states that advertisements will be allowed provided that they carry a caveat that permits must be obtained before any transaction can take place.

That covers the advertising issue.

Gentlemen, we have a representative of the Department's Solicitor's Office here, if you want to probe the legal aspects of it, but generally the sale within one State's jurisdiction can be said to be an intrastate sale.

If, however, the person were to remove it from the jurisdiction in the course of a commercial activity, and of course commercial activity is now defined, he would be violating the Endangered Species act. A lot depends on the nature of the transaction.

These are the restrictions currently imposed by the act. The euthanasia question is a difficult one because the act prohibits taking without making any distinctions. We are aware of the question but we found it difficult to deal with by regulation, because the act is very plain in what it restricts.

I think, again I do not want to speak out of line on the policy aspect, but the law enforcement end of our business sees no problem with euthanasia properly carried out under veterinary supervision. It is a common practice, and one that is apparently for the animal's benefit, and for the species' benefit. So it poses us no enforcement problems.

Mr. GREENWALT. There apparently is a legal technicality involved, not a practical one. Technically it is against the law to do that kind of thing, but from a practical point of view, we have no objection to the practice.

Mr. LEGGETT. Mr. Steele.

Mr. STEELE. I am George Steele, Zoological Actions Committee. One of the basic questions that concerns the Zoological Committee is what species and how many species will be qualified.

Some of our feelings, and our reading of these regulations would indicate that relatively speaking, it might not be more than, say, seven or eight species. We are very concerned about other species that may not be qualified as captive self-sustaining population, which are really endangered, and which we in the zoological community would like to free up for captive breeding.

So the question is how many species are going to be covered in the Department's line?

Mr. LEGGETT. Let me ask the question.

Why do we limit breeding, free breeding to captive self-sustaining, as long as there is a restriction, or as long as there is notification to the Department, and as long as the breeders are approved for the particular animal?

Why limit the activities?

Mr. PARSONS. I can answer that question in part, Mr. Chairman, but someone else will have to answer another portion of it.

The authority you have described is available under section 10(a) of the act. There are permits available for breeding of endangered species. The permits have been available since the passage of the act.

The only valid criticism of the permit system that I can see is that it has taken to long to issue permits.

We believe that situation has improved vastly since we began administering the act. You are aware that there is a requirement that these permits be published in the Federal Register, and subject to comment for 30 days, which obviously means it takes longer. That is one of the reasons why we proposed an amendment to the act, giving us the powers in an emergency situation to waive the 30-day requirement.

But permits are available, and we have made, I think, considerable progress in improving the handling of permits. We now use an application form which is standardized for all the permits we issue.

Mr. LEGGETT. What is the purpose, though, if the facilities are approved, and what is the purpose in the publication requirements?

Mr. PARSONS. That is the part of the question that someone else will have to answer, I am afraid.

Mr. SCHREINER. Mr. Chairman, there are several factors involved.

First, the captive self-sustaining population regulation is primarily for the purpose of permitting those animals to be bred in captivity that can be bred in captivity with a minimum of Federal involvement.

There are many animals that are very difficult to breed in captivity, as I understand it. Either they cannot be propagated at all in some cases, or only a very few people have the expertise or facilities to do it in other cases.

For those animals that are difficult to breed in captivity we had hoped to go through the regular permit process, because that gives us a chance to consider the facilities, and the expertise of the individual involved, and try to permit the breeding of these kinds of animals where there is the most chance of being successful.

There are many kinds of animals that are commonly bred in captivity, and I would suggest to you that there are a lot more than seven or eight. There was one paper given here from a very competent zoologist that has suggested that there may be several dozen species that belong in that category.

For those kinds of animals that are readily bred in captivity we would like to license the breeders and let them go about their business with a minimum of Federal intervention.

There is little chance that this kind of operation is going to have a bad effect on the wild population, so there is no reason why these animal breeders should be regulated severely.

Mr. LEGGETT. As I understand it, it is only in those situations where you are trying to get a white tiger, or you have got a high incidence of offspring mortality, where you would like a close oversight over that particular activity, and require the publication; is that right?

Mr. SCHREINER. We would like to assure that maximum chance of breeding difficult species will occur.

Mr. LEGGETT. I think with that explanation that should clear the record up considerably, and I think it should allow for a little more free exchange of endangered animals that can be freely bred in captivity.

Let us move on to counsel's second question.

Well, I will let you read it.

Mr. SPENSLEY. Subsection (4) (b) states that a determination of "endangered or threatened" is to be based upon "best scientific and commercial data available."

Is this interpreted by the Interior Department to require that every shred of evidence possible must be obtained before a determination can be made?

Mr. SCHREINER. The answer is no, Mr. Chairman.

If you will examine the status reports that we have prepared, thus far you will readily see that what we have done is a quick review of the literature, and a quick contact with the primary experts that we know, and then summarized our information in to what we call a status report.

Depending on what is known about the species, these reports may be just two or three pages long, or they may be many pages long, if there is a lot of data available.

But in fact, I would call it the minimum data necessary to assure us that we should, in fact, place this animal on one list or the other.

In the case of a threatened species, we also must have the minimum data needed to assure us that the proposed regulations are appropriate.

Mr. SPENSLEY. To follow up on that, what are the documents one has to prepare once a species is recommended for listing? You mentioned a status report.

I also understand that there is an environmental assessment that needs to be done, and several other things.

Could you just quickly list them, and tell us about how big they are?

Mr. SCHREINER. The basic records that we require or what we believe the act requires, are first a status report, which tells us, or

suggests that the animal should be placed on the list and then; some kind of document that complies with NEPA.

Our administrative record, must show that we consulted with the State, in the case of a resident species, and that we have consulted with the foreign country in the case of a foreign species. Finally, proposed rulemaking, and a final rulemaking must be published in the Federal Register.

Mr. SPENSLEY. Now, what goes into the status report, just as an example?

Mr. SCHREINER. It depends on what information is available to us, and of course, that varies widely. With many species, very little is known. With others, a considerable amount of information is available to us.

Basically it covers the current status of the population, the trend of the population, the trend of the habitat, any major problems that the species is facing, any major solutions that we see are clearly available to help the species, and a list of the known experts on this species. All very basic minimum information.

Mr. SPENSLEY. Then who decides whether the status report is complete or adequate to move to the next step?

Mr. SCHREINER. That is generally my job. If I think it proper, I recommend to the Director that we have the basic evidence necessary to go ahead with the listing, delisting or reclassification.

Mr. SPENSLEY. You mentioned that you look at the trend of the habitat. What implies that you define the habitat for that species?

If that is the case, I think your testimony the other day reflected the fact that it was very difficult to define critical habitat.

Is there differentiation between critical habitat and the habitat in your status report?

Mr. SCHREINER. What I meant to say was that we gather any data that is available on the trends or conditions of the habitat, at present and what we anticipate it would be in the future.

This does not necessarily mean that we know everything about all of the habitat or what the critical parts of the total habitat are.

In fact, rarely do we know that. We may have or be able to obtain information that suggests that the trend of the habitat is improving, or that it is getting worse, or something of that kind. Very basic information.

Mr. LEGGETT. Let me ask you this.

On the publication aspect of this matter, it appears that there are few groups in the country that go through the laborious task of inspecting the Federal Register every day to see kind of what is there and what is not.

Is there not some procedure that you can develop so that people that are extremely interested in what you are doing can get on some kind of mailing list where they will get notice of the things that you are doing?

Mr. SCHREINER. Yes, sir; I am glad you asked that question, because it gives me an opportunity to tell you about another of our activities.

We have just completed a conservation directory of the people and organizations that are interested in endangered species in the United States. As soon as we can, we intend to start communicating with them regularly, when we have something to tell them

about, as the proposed listing of a species, or the determination of critical habitat. Of course, we will request their assistance and help.

Mr. LEGGETT. Very good.

Well, that could be kind of a regular procedure that you publish.

I know we in the Congress, we get, obviously you send out 535 things every time you change some of your regulations, and I doubt there is that many organizations in the country that do have perhaps a more primary interest in what you are doing than the Members of the Congress.

Mr. SPENSLEY. Could I ask Mr. Gehringer whether the national fisheries has the same procedure for developing the status report? Whether you also require minimum of data before you go on to the next step?

Mr. GEHRINGER. Yes.

Mr. LEGGETT. We have your testimony concerning your staff experts, we also aware that a number of rather eminent scientific and conservation organizations have expressed a very deep interest in the Endangered Species Convention effort, what formal system do you have for utilizing the expertise and services of these persons or organizations beyond a casual personal colleague relationship, and from whom do you obtain your commercial data?

With respect to subsection (b)(1)(B), would a 30-day time period, with a 15-day option, be more appropriate to expedite the listing process when resident species are involved?

What if this 90-day period were completely eliminated?

Mr. SCHREINER. Let me speak to the first part of the question, if I may, Mr. Chairman, which concerns the Endangered Species Convention.

A draft Executive order provides for participation by several Federal agencies—Interior, Commerce, Agriculture, and HEW,—on the scientific committee, as I recall, and in addition the services of outside scientists or conservation groups may be requested.

I hope I am answering the first part of the question in the way it was intended.

The management authority also will be handled by several Federal agencies, including Agriculture, Commerce, and Interior, at least as now proposed. As it is presently proposed, Interior would be the communicating authority, with the secretariat of the convention.

Mr. SPENSLEY. Mr. Schreiner, I think the question is really meant to address whether any formal system is established between the Service and some of the outside groups that have expertise in these areas. Whether you have any contracts with them, or formal liaison.

Mr. SCHREINER. Let me make certain I understand the question clearly. If we are talking about listing a species on the U.S. list, then it is our practice to contact all of the known experts on that species.

Usually we know who the experts are, both in the United States and in the world.

We are also required to consult with the State agencies where resident animals are concerned, and of course, we do that routinely.

Mr. LEGGETT. I guess the people believe that they are known ex-

perts, they can call you and ask to be listed, and consulted. If they are in fact experts they will be consulted, is that right?

Mr. SCHREINER. Yes, sir, that happens frequently.

Mr. LEGGETT. How about the second item there, where the suggestion is made that we must use a 30-day time period with a 15-day option, as opposed to 90 days?

Mr. SCHREINER. I assume you are referring to the requirement of the act, where State agencies must be given 90 days in which to respond to our efforts to consult with them.

Mr. Chairman, I feel that the State agencies would be opposed to shortening this period materially. The simple reason is that sometimes our requests are multiple requests. They concern several species, and oftentimes the State agency may have to seek outside expertise to respond to our request. I have the feeling that the 90-day period might be reduced to 60 days without being terribly disturbing to the State agencies concerned, but if it were reduced so much loss than that, it is my personal opinion that we would not get the kind of response from the State agency that we need.

In many cases, the real expertise on these species is in the States, and I strongly believe that they should be given a full opportunity to tell us what they know about it.

Mr. SPENSLEY. Mr. Schreiner, after that, if you have proposed rulemaking, then you allow another 60 days for comment. Then after that, one can still request a public hearing.

So presumably you have at least another, say, 120 days, assuming it takes 30-day notice for a public hearing, and then 30 days to leave the record open. It seems that after adding the 90 days for State responses and the 60 days for comments to proposed rulemaking with potentially another 60 days for public hearings, an inordinate amount of time results before action can be taken.

Mr. SCHREINER. First of all, the 90 days and 60 days can run concurrently. There does not have to be a 90-day period followed by a 60-day period. They can be one and the same.

Mr. SPENSLEY. When you get a request and proposal for listing, can you immediately publish a proposed rulemaking at the same time that you notify the Governor's?

Mr. SCHREINER. If we have adequate information we can do that, but in many cases we do not have the basic biological information that it takes to go to a proposed rulemaking immediately.

In other words, we do not have the best scientific and commercial data available to us. It takes time to get it in some cases. Many times when we are petitioned, only a very small part of the data is submitted with the petition and that is the data that supports the position the petition is taking. Rarely will a petitioner send us data that is contrary to his petition.

Therefore, we must get it. If we can bypass the notice of status review, we do, and we have several times recently.

Mr. LEGGETT. Now, you are talking about the listing of animals endangered or threatened, is that right, counsel?

Mr. SPENSLEY. Yes.

Mr. LEGGETT. Well, as I understand, you have applications for something like 23,000 animals, have you not?

Mr. SCHREINER. We have petitions that cover over 23,000 species, as species are defined in the act—meaning species, subspecies, or population segments.

Mr. LEGGETT. Have you asked for State comment on all of those items?

Mr. SCHREINER. We either have done it, or we are in the process of doing so now.

Of course, that kind of request can be overwhelming to some of the States; particularly where there are many species in one State.

As a matter of fact, many of these 20,000 species that you are talking about are foreign species, so we are contacting foreign governments, rather than States. But yes, we either have, or are in the process of doing so now.

Mr. FORSYTHE. Mr. Chairman?

Mr. LEGGETT. Yes. Mr. Forsythe.

Mr. FORSYTHE. That includes plants, too?

Mr. SCHREINER. Yes; it does.

Mr. LEGGETT. George?

Mr. MANNINA. Mr. Schreiner, with respect to the 23,000 species you have mentioned. I thought I heard a figure that 15,000 were different species of orchids, and 300 were different species of cactus, which could be handled as a block.

If that information is accurate, does that not significantly reduce the efforts to which you are referring?

Mr. SCHREINER. It is my understanding that what you are stating is accurate.

Some 17,000 species of the orchid family that are listed on the convention, are from, one family of plants. However, it is still mandatory that we list them species by species, or subspecies by subspecies. Somebody is going to have to take a look at them individually and collectively. Somebody who is an expert in this area will have to determine if each species is in fact threatened or endangered, or whether certain ones in there that should be deleted.

Mr. MANNINA. I thought that the habitat was so intertwined for these species that they could be handled as a group.

Mr. SCHREINER. I am not an authority on this, but we have a botanist present.

Mr. Chairman, could I call on him to speak to that question?

Mr. LEGGETT. Yes.

Mr. SCHREINER. Will Dr. MacBryde please answer the question?

Dr. MACBRYDE. Thank you. There are approximately 17,000 species of orchids in the world. They range from the southern extremes of the continents in the southern Hemisphere through the tropics and to the arctic, and their habitats therefore vary widely. Some could be dealt with by considering their ecosystems in general, but some would have to be dealt with as individual cases.

Is this a sufficient answer?

Mr. MANNINA. Are you saying that it is impossible to group them or are you saying that the habitat is so different that each one must be handled differently?

Dr. MACBRYDE. In some cases the habitat could be dealt with for a group of species. In other cases I feel the individual species, or subspecies, would have to be looked at, to determine its critical habitat.

Mr. MANNINA. Where it is possible to review the plants as a group, is it the Department's intent to do so?

Dr. MACBRYDE. Yes, we are just beginning this effort. It is being conducted with the help of the entire botanical community, such as the Smithsonian Institution, the American Orchid Society, and others here and abroad.



There is in the room the chairman of the Department of Botany of the Smithsonian Institution, who has recently written an article on the threatened and endangered orchids of the United States. Perhaps you would like to ask him a little more about the problem regarding orchids in the United States.

Mr. MANNINA. No, I was concerned with how you were handling it at this point. Perhaps you will keep us advised of these procedures.

Mr. SPENSLEY. Mr. Schreiner, would that reduce the 6,000 years to say 300 years?

Mr. SCHREINER. Many people simply do not understand what is required under the law to officially list a species as endangered or threatened. I simply wrote that to make it clear that we are going to be in the listing business for a long time, all of our lives, probably, and we may never in fact finish the job.

It was not intended to be pessimistic, and it certainly is not humorous. It is a very serious business to me, but we are going to be at it for a long time, and what this means is that we must establish listing priorities, and list first those species that will benefit the most by being listed.

Mr. LEGGETT. Well, have you got your house divided over there so that the 17,000 plants can be treated as an entity, to that they do not confound the administration of the several thousand animals that we are concerned with?

Mr. SCHREINER. I have several different kinds of professionals, many are present in the room, that are experts in various scientific disciplines. We have two botanists. We have mammologists, ornithologists, a malacologist, ichthyologists, botanists, and an invertebrate biologist.

Their combined expertise covers most of the animal and plant kingdom, and they work together, of course, but they are also each working in their own specialty area.

Mr. LEGGETT. We have plants and animals in the same bill, but they really—but sometimes people talk to plants, but I do not think the plants converse very much.

Now, I guess we have your views on that.

Ed, do you want to ask some of these questions?

Mr. FORSYTHIE. Fine.

Mr. LEGGETT. Number three is covered.

Mr. FORSYTHIE. When you have a species listed, how do you monitor the well-being of that species?

Mr. LEGGETT. Which are listed.

Mr. SCHREINER. The species in the United States are being monitored by what we call recovery teams. I believe I referred to them in my earlier testimony.

They are groups of experts, on site who are responsible for the species, and they work with them regularly. We receive regular reports from these recovery teams about the status of the species, what its problems are, what needs to be done to help it, these kinds of things.

With foreign species it is a little more difficult. The facts are, we often do not know about the current status of foreign species.

In some cases we do, because we have contracted with various scientific groups to look into the status of particular species.

For example, we now have scientists checking on the status of the primates of the world. Soon we should have the best information available on the current status of all primates, species by species.

The fact remains, Mr. Forsythe, that we often do not know what the current status of foreign species is.

Mr. FORSYTHE. Let me just follow that up.

On page four, you mentioned that you have these recovery teams. How are they funded, or how are they operated? Do they answer directly to you in your shop?

Mr. SCHREINER. Yes, sir, we provide minimum funding for the day to day operations of the teams, secretarial assistance, postage, those kinds of things, but we depend on the Federal agency concerned if the team is composed of Federal agency members, to pay their salaries, and their travel, and so forth.

In the case of State personnel, we depend upon them to pay the salaries of their own people, and if the team has private organization members we depend on them to get their own money, however they can.

Mr. FORSYTHE. You use the whole range of either Federal or State personnel.

Mr. SCHREINER. Yes, sir, wherever we can get the expertise, and the help, we use it.

Incidentally, the funds that we provided directly to recovery teams for incidental expenses is between \$2,000 and \$4,000 per year, depending on the complexity of the job that they have to do.

Mr. FORSYTHE. How do you feel that that is working?

Mr. SCHREINER. I think it is working excellently, Mr. Forsythe. We have been extremely pleased at the way Federal, State and private agencies have accepted this idea, and pitched in, and I think they are doing a tremendous job. Although the majority of them are just getting underway now, I think we are going to see real progress in the months ahead.

Mr. LEGGETT. Now, with respect to the EIS requirements on a listing, you have given some lip service to programmatic statements.

On the other hand, you indicate that individual statements are being considered. What do you plan to do?

Mr. SCHREINER. Mr. Chairman, we plan to go ahead and complete a programmatic statement, but I would be less than candid with you if I did not tell you that it will take months to complete it.

The programmatic statement will cover the entire act, including the convention and the Pan-American Treaty as well. So it is going to take a long time, and hard work, to get a good acceptable programmatic statement.

We hope then to use that as the basic document required by NEPA, to cover at least those species that are the least controversial and those actions which will have minimal impact on the environment.

When dealing with a species that obviously is going to have a considerable environmental impact, we are probably going to have to write additional impact statements of those species.

Mr. FORSYTHE. Mr. Chairman?

Mr. LEGGETT. Mr. Forsythe.

Mr. FORSYTHE. Mr. Schreiner, have you thought of dividing that massive programmatic statement so that you could move forward with greater speed and without having to complete the massive study involved with a single programmatic statement.

Mr. SCHREINER. Mr. Forsythe, the job may not be quite as difficult as it seems, because we have a draft impact statement now on the convention. So we have a start. We also have a completed impact statement on the original Endangered Species bill as submitted by the Department of the Interior. It is not however the same as the bill that was passed.

So between those two we have a start on this job. But it is still going to take many months to pull them together and develop the new parts that are going to have to be added.

In the meantime, we have been preparing what is called under NEPA, an environmental assessment, and as long as the assessment does not suggest that an environmental impact statement is needed, we add a negative declaration, and let it go at that.

Mr. FORSYTHE. So you are talking in the framework of months so far as the programmatic statement, not years?

Mr. SCHREINER. No; months.

I would hope less than a year. Much will depend, of course, on the manpower that we can devote to it without halting everything else in the process.

Mr. FORSYTHE. When you use the assessment which you obviously must, what criteria do you utilize in the evaluation?

Mr. SCHREINER. The council on Environmental Quality has issued guidelines. Mr. Bertram from CEQ is here in the audience. He is a better authority on this subject than I.

The assessment that we have done so far have ranged in length from 6 to 30 pages in length, depending again on the species, the complexity of the issues involved and so forth.

Mr. FORSYTHE. Has there been much criticism raised about the assessment?

Mr. SCHREINER. There has been criticism that the assessments were not good enough, and we should have written environmental impact statements, but no one has taken us to court yet.

Mr. LEGGETT. Item No. 9 talks about the green sea turtle stocks. Apparently somebody has alleged that at one time there were 50 million, and now there are less than 10,000. They applied to have them listed as endangered.

The Deputy Director Pollock of NOAA, indicates that they would be listed shortly, and apparently not much has taken place. What is the problem with this?

Mr. GEHRINGER. Mr. Chairman, if I may address that.

I must confess that I am not familiar with the information on which Mr. Pollock based his optimistic statement.

We share the responsibility jointly with the Department of the Interior, Fish and Wildlife Service, for sea turtles. Their feeling was that the environmental assessment was adequate and an environmental impact statement was not required.

Within the Department of Commerce, we felt that the situation involved some controversial issues which required the preparation of an environmental impact statement.

To the best of my knowledge, CEQ was not asked for its advice as to whether a statement was necessary or not. This decision is made within the Department.

We did not get concurrence from CEQ as to our position that a statement was required. That was within the Department of Commerce.

Mr. LEGGETT. Now, if the environmental statement was holding you up on this matter—let us see, the application is made to list the species as threatened.

How does that involve an environmental impact statement?

Mr. GEHRINGER. The issues with respect to the sea turtles, which have been in commercial trade, raises the controversial issue as to whether the request of industry to have a hearing and to request an environmental impact statement led to this particular set of circumstances.

We will hold a hearing in early December. We are preparing an environmental impact statement, and eventually there will be an EIS completed, and final action taken.

To the best of my information now, and I am speculating, it will be March before this exercise will be completed.

Mr. LEGGETT. Then I would suspect that if you find that so many of these procedures do take an unreasonably long time you do have authority to act under your emergency powers, is that right?

Mr. GEHRINGER. My understanding is that this action is for listing a species as threatened, not endangered, and the emergency measures apply, only for action to list a species as endangered, not threatened.

Mr. LEGGETT. I see.

Counsel?

Mr. SPENSLEY. Could I go back to the recovery plan for the moment?

The question was directed to Mr. Schreiner.

You indicated that you felt that they were fairly successful. One of the answers to the question that was sent to the committee, is that there has been only one recovery plan listed for the species.

I realize that that may not be the only measure of success, but what is the problem with the other 47 some recovery plans in terms of the work that they were set up for?

Mr. SCHREINER. The problem is that many recovery teams have only recently been established. Additional new teams will be established in the future.

The recovery team's first job is the preparation of a recovery plan. It takes a little time to do this job efficiently.

It would be wrong to assume that while the recovery plan is being prepared, the team is not taking care of the primary needs of the species, because they are. The older teams which were established several months ago, are actively doing those things needed to effect the recovery of the species, when known, while the official document is being prepared.

A good example would be the case of the red wolf, on which we have had a team working for well over a year. Several activities are being coordinated even though the recovery plan has not been completed.

In order to establish a captive sustained population, they are actively seeking an island that is canine free, because one of the problems with this species is cross breeding between coyotes and wolves.

They are working with landowners and ranchers to change their view of wolves. This has been going on for several months, while the actual plan is being completed.

Mr. LEGGETT. In section 6, cooperation with the States, it appears that the States are not cooperating very well.

You indicate that you may have 20, I think, cooperative agreements, executed over the next 6 months or 1 year. Outside of spending money, how can we encourage them to cooperate?

Mr. SCHREINER. Mr. Chairman, there are several reasons, in my view, why some States are not terribly enthusiastic about signing a cooperative agreement with us.

First and foremost is the fact that we do not have any grant-in-aid funds to offer them. If we had some, many States would immediately take interest and go about the business of getting a cooperative agreement.

Another reason is that some States feel that there is very little to be gained by signing a cooperative agreement, aside from obtaining Federal assistance.

In other words, the prohibitions on endangered species are the law, and nothing can be done about it. The State cannot regulate the taking of an endangered species, because it is prohibited by the act.

The permit system does not really help them there either. They still have to obtain the Federal permission before they can take action to conserve endangered species.

The one area where they are helped the most, of course, is with the conservation of threatened species, but only when the regulations which establish a threatened species give the State regulatory authority or at least do not proscribe State regulations.

The final reason that has been stated, and this is in the literature, results from the fact that the Endangered Species Act covers the whole plant and animal kingdoms, and because the States anticipate that we are likely in the future to have a terribly long list of endangered and threatened species. They feel that they could be severely overextended if they had so developed programs for all of the endangered species on the U.S. list, which is what section 6 of the law requires.

Some of them are reluctant to sign cooperative agreements, because they do not want, for example, to have to develop programs for butterflies or things of this type.

Mr. LEGGETT. Would it be feasible to amend either the law or the regulations to allow them a limit?

Mr. SCHREINER. It would be feasible, of course, Mr. Chairman. If the States were not held to the section 6 requirement that they develop programs for all endangered species on the Federal list, then, of course, they probably would not seek their own authorities to allow them to do that.

On the other side of the issue is the fact that States that now have the authority for certain species, and would be willing to sign cooperative agreements, could provide considerable help

for those endangered species immediately if we had a cooperative agreement with them.

I tend to favor the latter idea, Mr. Chairman. I think that the States should be allowed to enter into a cooperative agreement with us for those species that they now have the authority to conserve.

Mr. SPENSLEY. Mr. Schreiner, could you point to the section in the act that requires the State to have authority for all species?

Mr. SCHREINER. It is section 6(c)(2), page 7, which states:

The State agency has established acceptable conservation program, consistent with the purpose and policies of this act, for all resident species of fish or wildlife in the State which are deemed by the Secretary to be endangered or threatened, and has furnished a copy of such plan and program. \* \* \*

Mr. SPENSLEY. I must have misunderstood your statement, because I thought you said the State had to have a program for all species on the endangered species list, which is quite a bit different from all resident species.

For example, the State of Iowa may not have a program to preserve the Alaskan fur seal, which might be on the endangered species list.

Mr. SCHREINER. Our policy is that the resident species, which is not defined by the act, means any species which resides in any States at any part of its lifetime.

Obviously, Iowa does not have to have a program for fur seals, but it would have to have a program for any resident species that resides in Iowa at any time during its lifetime.

Mr. SPENSLEY. Do you feel you could not liberalize by regulation this section of the act, and perhaps take the responsibility for a particular species?

Would there be some problems?

We heard testimony last week from the Fish and Game Commissions, that they felt the cooperative agreement was probably too strict, and did require a program for the entire list of endangered species.

Is there some way that you could get around that problem?

Mr. SCHREINER. You are asking me a legal question, and I am a biologist.

However, our solicitor, Mr. Peter Kelsey, is in the audience. Could I ask him to address your question, please?

Mr. KELSEY. Counsel, because of the language that Mr. Schreiner read, referring to all species, I think you would be asking us to, in effect, amend the language of the act by regulation, to require less than all resident species to be included in the cooperative agreement.

We do not want to amend the act ourselves and I do not think you want us to do that.

Mr. LEGGETT. Can you go ahead and suggest, in a formal way this objective that you are talking about?

Mr. SCHREINER. Yes, sir; we would be pleased to do so.

[The information referred to follows:]

JUSTIFICATION FOR AMENDING SECTION 6(c)(2) OF THE ENDANGERED SPECIES ACT OF 1973

The suggested additional wording in Section 6(c)(2) would in effect permit a broader interpretation of what constitutes an acceptable State conservation program.

Presently States do not meet the qualifications of Section 6(c) (2) unless the State agency has conservation authorities over *all* resident species of fish or wildlife deemed by the Secretary to be endangered or threatened.

Some State conservation agencies have requisite authority over vertebrate species but do not have this authority over invertebrates. New Mexico is a case in point. We have notified the Governor of New Mexico that they are presently qualified to enter a cooperative agreement with the Fish and Wildlife Service. However, we are considering placing two species of butterflies, occasionally occurring in New Mexico, on the Endangered Species List. Since New Mexico does not have conservation authority over invertebrates, they will no longer be qualified and the agreement must be voided. This action would be detrimental to our cooperative efforts in conserving vertebrates in the State.

Several western State conservation agencies do not have jurisdiction over predators. In Oregon, for example, the State Department of Agriculture has jurisdiction over predators. Since the Rocky Mountain timber wolf is Federally listed as endangered, Oregon is ineligible at this time to enter into a cooperative agreement, and other endangered and threatened species in Oregon are not afforded benefits derived from a cooperative agreement.

Our feeling is that endangered and threatened species conservation cannot be done complete by the Federal Government. Cooperative agreements are one of the major tools with which to conduct a nationwide program to save these species from extinction, and all approaches to expediting cooperative agreements and encouraging States to conserve endangered and threatened species should be investigated. The amendment would allow the Service and States to continue cooperative agreements and conservation measures on those endangered and threatened species for which the States have authority. Failure to amend the Act would require the Service to terminate an existing cooperative agreement when a species is placed on the Federal list for which the State does not have management authority.

Delete Section 6(c) (2) and insert in lieu thereof:

"(2) the State agency has established acceptable conservation programs, consistent with the purposes and policies of this Act, for resident species of fish or wildlife in the State which are deemed by the Secretary or the State agency to be endangered or threatened, and has furnished a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary."

The proposed language permits the Secretary of the Interior to enter into a cooperative agreement with States which have lists of species and programs for those species at variance with the Federal program and leaves distribution of responsibility for individual species to be the subject of the cooperative agreement.

This proposed language is provided as drafting service and does not necessarily reflect the views of the Department of the Interior or the Administration.

Mr. MANNINA. Can I follow you up on that, Mr. Chairman?

Would the practical effect of the change be that the States would take over enforcement for those species which are easiest, thus leaving the Federal Government with responsibility for those species which are most difficult to work with, and given your limited resources right now, would that not further restrict the Department's ability to realize the goals of the act?

Mr. SCHREINER. I think the answer to your question is yes, in some cases. It would depend entirely on the States concerned.

Many States would assume the authority for as many species as they can, because of pride and their practical right to manage resident species of wildlife, with which I fully concur.

In other cases, the State would probably tend to walk away from some species, particularly the lower life forms, such as the reptiles, the amphibians, the mollusks, and the invertebrates.

Mr. MANNINA. If the statute was changed, would the Interior Department be prepared to fight to secure the proper staffing and funding to insure that it would be able to respond to the challenge?

Mr. GREENWALT. I enjoy the way you phrased the question, Mr. Counsel; certainly the Service would be prepared to do battle, and that is an arena in which we sometimes emerge victorious other-times, defeated.

Obviously, we would, as we have in the past, continue to enter this forum with OMB and indeed, with the Department, to secure the funds necessary to pursue the mandate of the act.

Mr. MANNINA. Considering OMB's attitude, past and present, do you realistically believe that they would give you adequate funds to handle the job?

Mr. GERENWALT. To do what the States would not do, I am not sanguine about the prospects—

Mr. LEGGETT. It is a practical matter if we had cooperative agreement. Even for the most likely species, that would take an awful lot of the bulk of the lands of the Federal people—

Mr. GREENWALT. I have discussed this very matter personally with a number of State directors, and most are enthusiastic about being able to take into their domain those species for which they presently have management authorities within the State.

It does present the very real problem that counsel suggested, that there are a number of species that have little appeal to the States insofar as management is concerned.

Mr. LEGGETT. Mr. AuCoin, thank you for coming. We would let you ask a question if you stayed.

Mr. AuCoin. I appreciate that.

Thank you.

Mr. FORSYTHE. Mr. Chairman, even if a State signed a cooperative agreement, we have no assurance that it would give proper attention those lesser species which are difficult to manage.

Mr. GREENWALT. They encounter the same problems, that is to say, funding and manpower, and as Mr. Schreiner suggested, there is great variation from State to State as to the spectrum of interest, and the degree of responsibility.

They are ready to expedite. Some State are broadly based in this regard, other States are very narrow in their enthusiasm for certain species of wildlife.

Mr. FORSYTHE. The end result is where we can get a State to pick up any part of it, it is probably a plus over what we are going to—

Mr. GREENWALT. Exactly. I think if one can generalize in this area, and as director I generalize in many areas, that without the support and contribution of the States, the effectiveness of this act has very little future, in my judgment.

Mr. FORSYTHE. Do you have, or could you develop for us, information as to what authority each of the States has with respect to an endangered species program.

Mr. GREENWALT. Yes, sir; I think we could analyze this for you on a State-by-State basis.

Mr. FORSYTHE. We would appreciate it.

[See p. 45 for information.]

Mr. SPENSLEY. I have just one question, and perhaps it might be addressed to the General Solicitor's office.

You have some final regulations, which I have in front of me, and I do not see any criteria for determining what an adequate conservation program is.



Again, I would suggest that perhaps you might use a more liberal definition there within that term, in order to cover a State which would have some existing program authority, but not a specific program for say 14 different subspecies of the butterfly.

Mr. SCHREINER. As that part of the process is being handled now, Mr. Counsel, we have professional wildlife conservationists who are reviewing the State programs in making that determination.

It is a professional judgment.

Mr. LEGGETT. Let us see, we have a final question here on co-operation of States.

We have had some correspondence with your office, and Mr. Bonker, on my right, is interested in this, concerning the Navajoh Tribal Council, that apparently controls some 1.3 million acres of land in eastern Washington, and they have indicated an interest in getting grants to control the taking of golden and bald eagles, and your reply, dated August 39, to my office, has indicated that under the act they would not qualify for a grant, perhaps maybe they could get something under some other Indian program.

Could the act be amended to provide them some assistance in this regard?

Mr. SCHREINER. Yes, sir. I would like to have counsel correct me if I am wrong, but I think the reason they cannot qualify is because of the definition of State agencies.

Mr. LEGGETT. That is what I understand. We would have to figure out whether or not you want the agreement directed to the Indian tribe, or the State.

Is the agreement with the States or with the Indian tribes?

Mr. SCHREINER. I would assume, inasmuch as most Indian tribes consider themselves to be quite autonomous, that they would prefer to handle any grant program on their own without the State.

I feel certain that is the way they would feel about it.

Mr. LEGGETT. I have a budget meeting at the present time, so I am going to have to withdraw. Counsel can proceed.

Mr. Bonker will be in charge. If Mr. Bonker has to leave, Mr. Forsythe will be in charge, and then we will proceed to exhaust these questions until 12 o'clock or 12:30, until we get tired, and then perhaps we can reassemble at 2 o'clock.

So, excuse me.

Mr. BONKER [presiding]. Mr. Forsythe.

Mr. FORSYTHE. Mr. Mannina has a question.

Mr. MANNINA. Before we go on to section 7, I would like to pose a question regarding section 4.

Mr. Schreiner, we have some information that while a species review is being conducted, there is no single person charged with the responsibility for making certain that all information which is necessary is gathered and analyzed, that it is everyone's responsibility, and therefore no one's responsibility.

Would you care to comment on that, please?

Mr. SCHREINER. That information is entirely erroneous. We have a good system, in which one man is in charge of the listing process and has a number of professionals under him. He organizes

the work, establishes priorities, checks them with me, and goes about the highest priority business in a professional manner.

I think the information you have is entirely wrong.

Mr. MANNINA. Thank you.

I am glad you cleared that up.

Mr. FORSYTHE. We heard some testimony last Tuesday that critical habitats were nearly impossible to designate. Yet, Dr. Talbot from the Council on Environmental Quality, and others, testified that the task was not nearly so difficult, and that considerable information exists for many endangered species.

Why, then, has not more critical habitat been identified?

Mr. SCHREINER. Mr. Forsythe, one of the problems with other people making statements of this type is that they do not have the responsibility for making these identifications or following through on them. We are the ones who have to do it, and we are the ones who have the responsibility if anything happens to go wrong.

However, in all candor, we have only recently begun to implement section 7, not because I do not consider it to be important, but because there were many other things that had to be done first.

This is a very important section of the act. We feel we must implement it in a carefully coordinated and prudent manner, and we are attempting to do that now. We have, in fact, already begun compiling a list of critical habitats.

I expect to have six or seven of the high priority habitats designated within just a few weeks, and then that will be followed, hopefully, by considerable now.

Mr. FORSYTHE. It is not purely a matter of lack of manpower. It is the concern for the difficulties of the process that is needed in order to do it right?

Mr. SCHREINER. It is a combination of both, Mr. Forsythe.

If we had more manpower we could do it much faster. However, the process is complex. It must be done according to the strict letter of the law.

If that does not happen, you are inviting a law suit, and the prospect of having section 7 judicially watered down.

Mr. GREENWALT. I think, if I may add something, Mr. Forsythe. It is quite apparent that section 7 is one of the most difficult and potentially delicate parts of the act, because of the implications of listing critical habitats. This requires, in my judgment, and I have thoroughly supported Mr. Schreiner in this area, very close coordination with the other affected agencies, because not only do Federal actions, but all actions derivative from Federal programs are conditioned potentially by section 7, and the designation of critical habitat. Without being facetious, although it may seem so, it is conceivable that with a proper array of critical habitat designations across the map of the United States, we could seriously impede, if not halt, many activities carried on either by the Federal Government or under Federal sponsorship in some fashion.

It is this kind of potential that warrants very careful consideration. I am not suggesting that we will compromise the welfare of an endangered species in any instance, but it is, as I am sure you

understand, a section of the act replete with potential difficulties, and I think we must work very carefully with the other agencies to make sure those difficulties are minimized, and this is what we are attempting to do.

Mr. FORSYTHE. I am sure you will.

I hope you will keep the committee informed of the progress.

Mr. GREENWALT. Most surely, Mr. Chairman, and Mr. Forsythe, especially when conflicts begin to arise, because they could be very serious ones, in my judgment.

Mr. FORSYTHE. I understood you to say earlier that this will be important.

Mr. GREENWALT. Precisely.

Mr. SPENSLEY. Does the person who takes charge of preparing the status report on a species proposed for listing, also have the responsibility for initially defining the critical habitat?

Mr. SCHREINER. This has not been the case in the past, but this is what we are trying to work towards, that the listing of the species, and the listing of the critical habitat will go hand-in-hand, and be done at the same time.

Mr. BONKER. Section 8, international cooperation.

There is a question from the audience.

### **STATEMENT OF RUBY COMPTON, NATURAL RESOURCES DEFENSE COUNCIL**

Ms. COMPTON. Ruby Compton of Natural Resources Defense Council.

I want to ask Mr. Schreiner if the Office of Endangered Species has considered Federal agency activities affecting endangered species outside of the United States, although on the U.S. list of endangered species?

Mr. SCHREINER. I am not certain that I understand the question, Mr. Chairman.

Could I ask for clarification?

Ms. COMPTON. Yes, section 7 of the act calls for other Federal agencies to consult with the Department of the Interior concerning their activities which affect the critical habitat of endangered species.

I would like to know whether you plan to list the critical habitat on the species on the U.S. list, although they are outside of the United States, and whether Federal activities affecting the critical habitat of those species will be dealt with by the Office of Endangered Species?

Mr. SCHREINER. This is a question that we have considered a number of times, and have not really resolved. Let me state what our thinking is at this time.

We believe it would be possible to list a critical habitat in a foreign country, where some Federal agency of the United States doing something that was adversely affecting a habitat of an endangered or threatened species within that country.

I cannot give you an example, but I suspect there are some.

However, section 7 requires, or suggests rather strongly that consultation be had with the States concerned before the listing of a critical habitat, and this would seem to imply that Congress

intended that the critical habitat designation be made solely within the United States.

I am sorry I cannot give you a more definitive answer, but that is our thinking at this point.

Mr. GEHRINGER. Mr. Chairman, may I introduce one point here?

We have commented on an EIS dealing with the proposed operation of a fleet of boats between the west coast and Honolulu. This is beyond the continental United States, and this is an area of great concern with us with respect to marine animals.

We are interested, and we are responding as the occasion arises.

Mr. BONKER. Do you feel that you need more legislative authority to respond to this particular situation?

Mr. GEHRINGER. I do not think there is a lack of legislative authority to respond to this.

Mr. BONKER. We have another question from the audience.

Would you state your name and organization?

Dr. BERTRAND. Gerard Bertrand, Council on Environmental Quality.

I feel I should address Mr. Schreiner's comments on critical habitats.

When Dr. Talbot testified last Wednesday, his comments were in reference to the scientific difficulty of describing critical habitats. Mr. Schreiner stated that critical habitat was difficult to identify, and Dr. Talbot's comments clarified that statement, and indicated that it was not difficult to identify in many cases.

I think this continues to be the fact. I have in my hand a press release of Interior's regarding six California butterflies proposed for the endangered list, and quoting from it, "the El Segundo butterfly is limited to a few acres near El Segundo."

I would think this would qualify as critical habitat, since that is all that remains.

I assume Mr. Schreiner intends to list this habitat as critical.

Mr. BONKER. Do you want to respond?

Mr. SCHREINER. I agree with Dr. Bertrand that the critical habitat for species that are endemic to very small areas, such as the ones that he has suggested, would be relatively easy to delineate.

I did not say easy to list, but easy to delineate.

On the other hand, the peregrine falcon, the grizzly bear, the wolves, and other species that range over a large area, presents a much greater problem in determining their critical habitat.

Yes, for some species it is relatively easy. You could include the Santa Cruz salamander, which is confined to a couple of small ponds and an adjacent hillside. But in the cases of far-ranging species, the delineation of that habitat which is critical to the survival of the species and its future well-being is going to be very difficult.

Mr. SPENSLEY. Mr. Schreiner, have you proposed to list those habitat that were listed—

Mr. SCHREINER. We do not have the species listed as yet.

Mr. BONKER. One further question from the audience.

Mr. REGENSTEIN. Lewis Regenstein, the Fund for Animals.

Could I ask a question about the listing process before we move on to another area?

A few days ago the Interior Department belatedly added some animals to the endangered list. Such as the Cedros Island mule deer, which the Interior Department estimates is down to less than a dozen, the peninsular pronghorn antelope, which, according to the Interior Department, only two or three small remnant groups survive; and the American crocodile with only about 11 breeding females left. In fact, in August of last year, over a year ago, the Department received a memorandum stating that immediate action is required if the crocodile is to be saved.

I would like to know why it took so long to list these animals, since Interior has had this information on hand for years, in some cases?

Is it Interior's policy to wait until the species is down to just a dozen or so before adding it to the list, and should we not try to list species before they reach the point of no return?

Mr. BONKER. Mr. Schreiner, do you want to respond?

Mr. SCHREINER. Let me take them one at a time.

The American crocodile, I believe was mentioned.

Mr. Chairman, the American crocodile was fully protected by State law and Federal agencies, and most of them are found on Federal land. The reason that we did not list this species sooner is that it simply was protected as much as it would have been if it were listed under the act any way.

There are many other species that are receiving no protection whatsoever. We felt they should come first.

In the case of the Cedro Island mule deer, a foreign species, belonging to Mexico, the fact is that this animal is down to very small numbers, we do not know how many. Perhaps only half a dozen.

Our listing of the species, in my view, will not help the species one iota, because of poaching by native people and predation by wild dogs.

The same is generally true of the peninsular pronghorn antelope. It is a Mexican species. It is being poached by Mexican nationals, and our listing it as endangered on our lists is extremely unlikely to have any beneficial effect on the species whatever.

Mr. SPENSLEY. I hope it is not only your feel whether it will be beneficial to the animals, or whether it will be listed or not. Do you have some formula whether it should be listed or not?

Mr. SCHREINER. No, sir, but priorities are strongly influenced by limitation of manpower and money. I do not question the fact that they should be listed; we did it when we had time to do it.

Mr. BONKER. Have you published a list of those priorities?

Mr. SCHREINER. It is not published, but we have such a list for the native species in the United States.

Mr. BONKER. Could you supply that for the record?

Mr. SCHREINER. I would be pleased to, along with the system used to establish priorities.

[The information referred to follows:]

#### ENDANGERED SPECIES PRIORITY SYSTEM

The need for a system to rank endangered species to serve as an aid in allocating funds was recognized early in the program. Initial efforts occurred in 1972 within the Office of Endangered Species. The approach underwent

additional study with contracts to the Missouri Cooperative Wildlife Research Unit in 1973 and 1974. Attachment 1 is a paper that describes the system developed by this effort. Attachment 2 are scores for most domestic endangered species using an early version of the Missouri Coop Unit system. While preliminary, we have been using these scores as an aid in setting priorities. It is the only list of endangered species that has been so ranked. This system may be too complex to maintain. A different proposal was accordingly devised and is described in Attachment 3. While the Missouri Coop Unit system is based on degree of endangerment, Attachment 3 considers some other values such as the taxonomic status of the species. Accordingly, a full species or the only species within a genus or family are given a higher rank than a subspecies or population.

We intend to pursue this further by not only considering degree of endangerment or threat and taxonomic status but also other factors such as socioeconomic and ecological values. Any system used is based on factors which are subjective.

Experience with the above systems has shown that ranking of species as to degree of endangerment and other values still does not constitute a priority system for allocation of funds. For example, land acquisition or construction projects would provide little or no benefit to some of our most endangered species, but are essential to prevent further decline of others. Likewise, law enforcement is highly important to maintaining species of commercial value like the alligator but of little importance to some which are highly endangered.

It has therefore become apparent that following a judgment on degree of endangerment, other values must be evaluated. Following this must come separate priority listings for specific categories of actions such as land acquisition, law enforcement, habitat maintenance, construction, research, and propagation. These again come to subjective judgments since, for example, imminence of habitat destruction, presence of a willing seller, and anticipated rises in land values help dictate which species are selected for land acquisition in a given year.

Progress has therefore been made in devising a means for establishing priorities. The effort has shown the ranking of species as to degree of endangerment does not in itself constitute a priority system. The subject is very complex. It is being pursued with the goal of refining a system for rating species as to degree of endangerment, relative importance and finally needs in relation to types of management activities. Such a system must be sufficiently simple to accommodate continuous changes since the status of species continually change along with additions to and deletions from the list.

#### [ATTACHMENT 1]

#### SETTING PRIORITIES FOR THE ENDANGERED SPECIES PROGRAM

(By Rollin D. Sparrowe, *Missouri Cooperative Wildlife Research Unit, Fish and Wildlife Service, Columbia, Mo.*, and Howard M. Wight, *Oregon Cooperative Wildlife Research Unit, Fish and Wildlife Service, Corvallis, Oreg.*)

#### ABSTRACT

The passage of the Endangered Species Act of 1973 broadened the responsibilities of endangered wildlife programs to include all members of the animal kingdom. The mandate of the Act to take action to protect and rehabilitate all species far exceeds the available resources of manpower and money, and a need therefore exists for a system that can assist in guiding allocations of available resources to endangered species programs.

We have developed an endangered species priority system over the past two years. This development included a test of the system, an assessment of the general data base on endangered animals, and peer review of the system and the philosophy behind it. More than 40 biologists from universities, state and federal agencies, and private organizations provided critiques of the system which were used to assist in preparing the version being presented.

The basis of the priority system is an assessment of the imminence of the threat to the species' continued existence. It is not an attempt to replace human judgment, but merely an aid to ranking endangered status prior to making decisions for action. The system is largely based on the biology of

the animal and the security of its habitat. Biological considerations center on numeric status, capability of the animal to respond to actions taken to reduce the threat to extinction, and genetic and evolutionary characteristics of the species. Trends in the amount and suitability of critical habitats are evaluated and man's capacity to manage habitats is scored.

The large variation in amount and reliability of information available on many endangered species influences the way in which a priority system can be constructed or used. There is no scientific justification for designing more sensitivity into the system than is warranted by the quality and quantity of available data. With repeated use of the system and the building of a sound and comprehensive data base on endangered animals, additional precision can be built into the priority system later.

The numerical score from the system offers a chance to regularly assess priorities for research or management actions through systematically considering the plight of a large array of animals. The score may be partially an indication of our lack of knowledge about the species, animals like it, or certain areas of natural science. If a large proportion of the total score is in the unknown category, it clearly indicates a lack of knowledge and a need to gather necessary data. Obviously, if an imminent threat which could wipe out the species has been identified, action to halt this threat would be taken regardless of the need for information.

A standard data base, such as a revised and regularly updated printout of a book similar to "Threatened Wildlife of the United States," is suggested for using this system. Such a standard source would provide consistency in dealing with the huge volume of data on endangered animals, and would allow regular input from private, state, and federal agencies and organizations. Continuing input from these sources and repeated use of the system will accommodate changes in the data base and will aid in assuring cooperative efforts directed at the ultimate goal of an endangered species program: to remove species from the endangered list.

The first step in using the priority system in the Endangered Species Program is to score each animal with the numerical ranking system. These scores will be used to list animals in rank order of endangered status. This status does not change with an ability or lack of ability to take specific management steps, and it should not. The second step of taking action to attempt to alleviate the threats to a species' existence will be influenced by political, economic, social, and biological factors. Overwhelming biological realities may supersede other considerations, and administrative realities may supersede biological considerations; but all who examine the program as it proceeds will be able to see from these priority lists where the departures are made.

#### SETTING PRIORITIES FOR THE ENDANGERED SPECIES PROGRAM

(By Rollin D. Sparrowe, *Missouri Cooperative Wildlife Research Unit, Fish and Wildlife Service, Columbia, Mo.*, and Howard M. Wight, *Oregon Cooperative Wildlife Research Unit, Fish and Wildlife Service, Corvallis, Oreg.*)

The passage of the Endangered Species Act of 1973 broadened the responsibilities of endangered wildlife programs to include all members of the animal kingdom. The Endangered Species List maintained by the Secretary of the Interior now (May 1974) includes 302 foreign species including one invertebrate, and 103 U.S. vertebrates. The 1973 Act also directed increased attention to invertebrates and plants, and implied that action would be taken to protect ecosystems which are vital to the preservation of any species. This broad charge will result in a greatly expanded list of threatened and endangered organisms. The mandate of the Act to take action to protect and rehabilitate all species far exceeds the available resources of manpower and money, and a need therefore exists for a system that can assist in guiding allocations of available resources to endangered species programs.

We have undertaken the development of an endangered species priority system over the past 2 years. This development has included a test of an early version of the system in which priority listings were generated, and the soundness of the system and the data base were assessed. A second version was prepared on the basis of this experience and submitted for peer review.

More than 40 biologists from universities, state and federal agencies, and private organizations provided critiques of the system which were used to assist in preparing the version being presented here.

The basis of the priority system is an assessment of the imminence of the threat to the species' continued existence. It is not an attempt to replace human judgment, but merely an aid to ranking endangered status prior to making decisions for action. The system is largely based on the biology of the animal and the security of its habitat. Biological considerations center on numeric status, capability of the animal to respond to actions taken to reduce the threat to extinction, and genetic and evolutionary characteristics of the species. Trends in the amount and suitability of critical habitats are evaluated and man's capacity to manage habitats is scored. There are four main sections of this priority system. They deal with the species': (1) population status, (2) vulnerability, (3) recovery potential, and (4) special attributes. Assignment of values (100 points total) to the sections and their subheadings are our subjective evaluations following consultation with other scientists.

The kind of system that can be used is influenced by the available data base. Many species, regardless of their biological characteristics, have simply not been of great interest or value to man, and thus our knowledge about them is sparse. Other species have either been elusive and hard to study, or have yielded data we cannot yet understand. The result is that we know quite a bit about some animals or about certain characteristics of groups of animals, and little or nothing about others. These disparities in the preciseness of information exist throughout the animal kingdom and influence the way in which any priority system can be constructed or used. There is no scientific justification for designing more sensitivity into the system than is warranted by the quality and quantity of the data. A useful comparison may be the following: if you measure an elephant in grams and he defecates, your attempt at added precision has been fruitless.

The use of general statements characterizing biological attributes of animals in different taxonomic groups may assure generally high scores for all animals which possess that attribute; for example, all animals which occupy high trophic levels may get high scores. It is also possible, of course, that animals in higher trophic levels are more vulnerable and more likely to become endangered.

In general, with our system we expect species in the most desperate straits to score highest. In addition, species about which we know little will also score high. This is because we have provided an "unknown" score in all sections of the system, and each of these unknowns can equal the score assigned to the most desperate condition. We suggest that total scores include the unknown component listed separately so that the contribution to a total score based on incomplete information can be identified. The first value will be the total score assigned for all sections, and the second the number of these total points that were the result of unknowns. Thus, an animal could receive a score of 75/15, meaning that 15 of the 75 points were based on a lack of data. Most likely, action on a species about which little is known would therefore be directed at providing information needed to assess its status. Obviously, if an imminent threat which could wipe out the species has been identified, action to halt this threat would be taken regardless of the need for information.

The priority system which follows has been constructed to be as flexible as possible to cope with the huge differences in quality and quantity of available information, and the great array of differences in biological characteristics between animals. Once animals have been scored with the priority system, and other information about them has been considered, the scores will be used to list them in rank order of endangered status. Action will be partly determined by political, economic, social, and biological factors. Overwhelming biological realities may supersede other considerations, and administrative realities may supersede biological considerations; but all who examine the program as it proceeds will be able to see from these priority lists where the departures are made.



## ENDANGERED SPECIES PRIORITY SYSTEM

*I. Current status of population (25 possible points of 100 total)*

| A. Index of population size (10/25):   | Points |
|--|--------|
| 1. No reduction in numbers and/or distribution.....  | 0      |
| 2. Descriptions indicate some reduction in numbers and/or distribution.....  | 1      |
| 3. Counts or estimates indicate some reduction in numbers and/or distribution.....   | 2      |
| 4. Descriptions indicate low population, rare animal, or population possibly always low.....   | 4      |
| 5. Counts or estimates indicate significant reduction from former numbers, or data, indicate population probably always low.....               | 5      |
| 6. Descriptions indicate possible extinction, extremely low population or severe reduction from former numbers.....                            | 8      |
| 7. Counts or estimates indicate severe reduction from former numbers, or descriptions indicate probable extinction.....                        | 10     |
| 8. Population size unknown.....  | (10)   |
| B. Index to population trend (15/25):  |        |
| 1. Data or descriptions indicate a stable or increasing population.....  | 0      |
| 2. Population stable or increasing, but data or descriptions show a history of large fluctuations in numbers.....                              | 2      |
| 3. Verbal description indicates declining population.....  | 6      |
| 4. Population declining but data or descriptions show a history of large fluctuations in numbers.....  | 8      |
| 5. Preliminary counts or estimates indicate a pattern of decreasing numbers.....   | 10     |
| 6. Counts or estimates indicate population decline of several years duration which will, if unchecked, lead to extinction within 50 years..... | 12     |
| 7. Counts or estimates indicate population decline of several years duration which will, if unchecked, lead to extinction within 25 years..... | 15     |
| 8. Population trend unknown.....   | (15)   |
| Total points for section I.....  |        |
| Unknown component of total (points based on lack of data).....   |        |

*II. Vulnerability (35 possible points of 100 total)*

|   |      |
|---|------|
| A. Reduction in amount and/or suitability of critical habitats which has occurred or is imminent (10/35): |      |
| 1. No reduction (not a problem).....  | 0    |
| 2. Slight reduction (no urgent problem).....  | 1    |
| 3. Significant reduction (up to ½).....   | 3    |
| 4. Severe reduction (more than ½).....  | 5    |
| 5. Approaching total loss.....  | 7    |
| 6. Total loss of original habitat (go to IIC).....  | 10   |
| 7. Insufficient knowledge (unknown) as to what constitutes critical habitats (go to IIC).....             | (10) |
| B. Rate of reduction in amount or suitability of remaining critical habitats—present or imminent (3/35):  |      |
| 1. No further reduction (not a problem).....  | 0    |
| 2. Slow (critical problem in next 50 years).....  | 1    |
| 3. Moderate (critical problem in next 25 years).....  | 2    |
| 4. Rapid (critical problem now or in next 5–10 years).....  | 3    |
| 5. Unknown rate of reduction.....   | (3)  |
| C. Population concentration (6/35):   |      |
| 1. Does not concentrate (go to IIE).....  | 0    |
| 2. Concentrates briefly (up to 1 month).....  | 2    |
| 3. Concentrates for substantial time (1–3 months).....  | 4    |
| 4. Species concentrated for all or most of year.....  | 6    |
| 5. Patterns of concentration unknown.....   | (6)  |

|  |               |
|--|---------------|
| D. Patterns of concentration (4/35):   | <i>Points</i> |
| 1. Species concentrate at many points.....   | 0             |
| 2. Species concentrate at few points.....  | 2             |
| 3. Species concentrate at a single point.....  | 4             |
| 4. Patterns of concentration unknown.....  | (4)           |
| E. Reproductive rate of existing animals (8/35):   |               |
| 1. Normal for the species.....   | 0             |
| 2. Slightly less than normal.....  | 2             |
| 3. Much less than normal.....  | 6             |
| 4. Reproduction not occurring.....   | 8             |
| 5. Reproductive rate unknown (go to IIG).....  | (8)           |
| F. Environmental contaminants, competition, unusual predators (7/35) or other mortality factors: |               |
| 1. Not present or problem.....   | 0             |
| 2. May exert some adverse effect.....  | 3             |
| 3. Likely to exert adverse effects or known to exert adverse effect on similar animals.....      | 5             |
| 4. Present and known to exert adverse effects.....   | 7             |
| 5. Unknown.....  | (7)           |
| Total points for section II.....   |               |
| Unknown component of total (points based on lack of data).....                                   |               |

### *III. Recovery potential (25 possible points of 100 total)*

|   |      |
|---|------|
| A. Protection of habitats (5/25):   |      |
| 1. Critical habitats protected or protection not required.....  | 0    |
| 2. Needed habitats in state or federal ownership; long term protection assurable.....   | 2    |
| 3. Requires purchase or transfer of critical habitats.....  | 3    |
| 4. Protection essential but difficult or impossible to assure.....  | 5    |
| 5. Needs for habitat protection unknown.....  | (5)  |
| B. Management of succession (5/25):   |      |
| 1. Critical successional stages not in short supply.....  | 0    |
| 2. Species requires early to mid-seral stages of communities which in short supply or soon will be.....   | 2    |
| 3. Species requires mature to climax communities which are in short supply, or species has highly specialized habitat requirements that are in short supply and cannot be readily provided..... | 5    |
| 4. Insufficient knowledge (unknown) of management techniques to maintain optimum habitat.....   | (5)  |
| C. Potential for growth of population (expressed as percent growth normally possible from one breeding season to the next under favorable conditions) (10/25):                                  |      |
| 1. High—growth rate greater than 100 percent.....   | 0    |
| 2. High-intermediate—growth rate 50 percent to 100 percent.....   | 2    |
| 3. Intermediate—growth rate 25 percent to 50 percent.....   | 4    |
| 4. Low-intermediate—growth rate 10 percent to 25 percent.....   | 6    |
| 5. Low—growth rate 5 percent to 10 percent.....   | 8    |
| 6. Very low—growth rate 0 to 5 percent.....   | 10   |
| 7. Unknown growth rate.....   | (10) |
| D. Potential for recovery (5/25):   |      |
| 1. Following restoration of habitat, species should become ecologically secure.....   | 0    |
| 2. Maintenance of the species will require continued high intensity management.....   | 3    |
| 3. Present hope for preservation of the species requires zoo or aquaria-type husbandry.....   | 6    |
| 4. Unknown potential.....   | (5)  |

Total points for section III.....  
 Unknown component of total (points based on lack of data).....

IV. *The species (15 possible points of 100 total)*

|  | <i>Points</i> |
|--|---------------|
| A. The animal is classified as:  |               |
| 1. A subspecies (go to IVC)-----   | 0             |
| 2. A species (go to IVB, skip IVC)-----  | 3             |
| 3. Unknown (taxonomy in doubt, go to IVD)-----   | (6)           |
| B. For the species:  |               |
| 1. Hybridization currently known to occur-----   | 0             |
| 2. Hybridization is possible but is not presently occurring-----                                     | 1             |
| 3. Hybridization not possible due to isolation-----  | 2             |
| 4. Hybridization not possible because of an effective reproductive barrier with sympatric forms----- | 3             |
| 5. Status of hybridization unknown-----  | (3)           |
| C. (If a subspecies) The animal has evolved as a:  |               |
| 1. Clinal subspecies-----  | 1             |
| 2. Geographic isolate or is otherwise clearly isolated from other forms--                            | 2             |
| 3. Unknown-----  | (2)           |
| D. The taxon, species, or subspecies exhibits:   |               |
| 1. No limiting specialization-----   | 0             |
| 2. A somewhat limiting specialization-----   | 1             |
| 3. A highly limiting specialization—very narrow niche (food, habitat, etc.)-----                     | 2             |
| 4. Unknown degree of specialization-----   | (2)           |
| E. Uniqueness; the taxon is a member of:   |               |
| 1. A polytypic species-----  | 0             |
| 2. A monotypic species or all subspecies are threatened-----   | 1             |
| 3. A polytypic genus-----  | 2             |
| 4. A monotypic genus-----  | 4             |
| 5. A monotypic family-----   | 5             |
| 6. Unknown-----  | (5)           |
| F. Security of taxonomic unit:   |               |
| 1. Related animals are not threatened-----   | 0             |
| 2. More than one threatened form in genus or family-----   | 2             |
| 3. Unknown whether related forms are threatened or not-----  | (2)           |
| Total points for section IV-----   |               |
| Unknown component of total (points based on lack of data)----  |               |

## EXPLANATION OF PRIORITY SYSTEM SECTIONS

## I. CURRENT STATUS OF THE POPULATION

Under this heading, population size and trend are combined to provide an index to the current numeric status of the species. Here, we first approach the critical question of how to evaluate the amount and reliability of information available on endangered species.

In a few endangered species, such as the whooping crane, direct enumeration of the size of the population is possible. For most species estimates are all we will ever have to work with. Numerical population estimates are usually lacking for species with high annual turnover rates such: as mice, small birds, most amphibians and reptiles. Where this is the case, generalized statements are usually all that can be given to indicate the size of the population such as: "rare," "population low," "possibly extinct." Even here we feel that some effort should be made to organize these statements into a ranking from "approaching extinction" to "abundant" so that a specialist in a particular species will be able to choose from standardized, verbal descriptions that might best fit his appraisal of the status of the population.

For many endangered species, the trend in population size is more critical than the current size of the population. A downward trend in population size may reflect deterioration of the habitat, reproductive failure, or increased mortality. Estimates of population size in species with a high reproductive potential may be highly variable, and may reflect varying reproductive success or survival rates each year. For this reason, the evaluation of population size and trend for these species should include several years of data to establish the long-term trend.

## II. VULNERABILITY

We assess the vulnerability of a species on the basis of the deterioration of its habitat and characteristics of the species which cause it to become vulnerable. Those conditions affecting a species habitat, which in turn affect food supply, reproduction and survival, can cause a species to become endangered. Critical habitats are defined as those essential elements in a species range that provide adequate food, cover, and water so as to allow the species to reproduce at sufficient rate so that reproduction balances mortality over the long term; special niche requirements are met, and required isolation is provided.

Note that the section on critical habitats includes consideration not only of amount, but also of suitability of habitat, and that it also allows consideration of an imminent threat such as a large public works project which might drastically reduce habitat. An example of habitat which has not deteriorated in amount, but is now largely unsuitable, is that of the peregrine falcon in the eastern U.S.

The potential of a species to become vulnerable is partly related to the degree of specialization exhibited by that species. For instance, the Florida Everglade kite, with a highly specialized adaptation for feeding on one species of snail, is inherently more vulnerable than a marsh hawk that has a wider (less specialized) food base on which to feed.

Other aspects of vulnerability are reproductive rate, and special survival problems. Animals which are concentrated and/or localized over their range, such as some waterfowl, are more vulnerable than those which are dispersed widely or occur at a number of localized points. The presence of introduced animals, or otherwise intensified interactions can create special survival problems through predation or competition (e.g., red wolf-coyote interactions). The special problem of pesticides may supersede other factors (e.g., DDT and peregrines). Any single factor can conceivably override many, or all, others in a determination of vulnerability. Obviously, if a threat to an animal's habitat and/or population is so great that it becomes permanent, then human judgment can and should supersede this priority system in responding to this critical situation.

## III. RECOVERY POTENTIAL

The recovery potential of an endangered species is defined as the potential to effect a meaningful improvement in the status of the population of the species. Endangered species that have little or no critical habitat left, in which inherent reproductive rate is very low, or which have a slow mean generation time reflecting very low capacity for population growth, may be difficult to rehabilitate. Some species are in such a plight that their only hope lies in removal to aquaria or zoo-type husbandry for retention of the gene pool until habitat problems are solved. For some species, even this possibility may now be lost.

The first consideration in this section is an assessment of the potential for achieving long-term protection of critical habitats. This is followed by ranking of the potential to manage habitat by manipulation of succession, as a means to provide for critical habitats or specialized niche requirements. For example, the needs of an animal that requires a habitat in an early stage of forest succession can be quickly and easily provided for by timber harvest, controlled burning, brush clearing, or managed grazing. To provide habitat for a forest-dwelling species that requires climax habitats, on the other hand, may mean protection of a forest for 150-300 years. If this type of habitat is in very short supply, the species may be beyond saving.

Another factor considered in assessing the potential for a species to recover from endangered status is its reproductive rate. Because of great differences in the reproductive strategies employed by species in different classes, it was apparent that we could not compare the several thousand eggs laid by some species of fish with the average of one young born per year for many large mammals and birds. A more meaningful expression of the recovery potential of a species is its capacity to reproduce itself and increase in numbers under favorable conditions. We recognize that the scoring of this section may require some mature biological judgments based on an assessment of the reproductive rate of the species and the expected survival rates of both young and adults, so that an estimate of the rate of average potential population growth might be made. The scores for this section are assigned on

the premise that a species that possesses a high average capability for population growth could be expected to respond readily to effective management of those factors responsible for its endangered status. Species with inherently low capability for annual population growth might be delayed a decade or longer even though conditions adverse to survival had been alleviated.

Some species with a low reproductive rate—such as the whooping crane, the California condor, the grizzly bear, and several of the marine mammals—also exhibit great longevity as adults. Longevity can be an advantage by allowing the species to persist while adverse environmental conditions are corrected. This undoubtedly mitigates, somewhat, against the extended time required to accommodate the slow growth of populations to a safe level.

Another assessment of the potential for a species to recover from its endangered status judges the level at which recovery is currently possible. Obviously, a species that needs immediate removal to a zoo for artificial maintenance of the gene pool until other habitat factors can be corrected is less secure than a species that can become ecologically secure once preservation of scarce habitats is assured.

#### IV. THE SPECIES

The Endangered Species Conservation Act of 1973 clearly defines the responsibility to provide for the conservation, protection and propagation of species, subspecies, or even populations, of threatened fish and wildlife. There is no priority established or mentioned as to whether a full species should take precedence over a subspecies in a case where there is no difference in the degree of endangerment of the two. We suggest that the potential loss of the gene pool represented by a biologically defined species should give it precedence over a subspecies. The concept of a species and the process of speciation are topics that must be considered in developing a priority system for endangered animals.

For terrestrial vertebrates, we adapt the ideas of Mayr (1965, *Evolution at the species level*, Pp. 315-355 in J. A. Moore (ed), *Ideas in modern biology*, Nat. Hist. Press, Garden City, NJ), who states "Most biologists whether geneticists, systematists, or evolutionists, are now in essential agreement on what a species is . . . We can hold that species are characterized by certain qualities, of which two are most important:

"(1) They are reproductively isolated from other species—that is they do not interbreed with them in nature. Interbreeding is prevented by so-called isolating mechanisms, among which sterility is best known but mating behavior most important (at least in animals).

"(2) They occupy definite stations in nature (their niches), and their requirements are sufficiently different from those of other sympatric species to permit coexistence without fatal competition.

"Species are usually also characterized morphologically, but the morphological criterion is not infallible, since various phenotypes within one species may be far more different from each other than are some good species (sibling species)."

Fisheries biologists who have critiqued our priority system have pointed out that the criteria of species designation based on reproductive isolation has not been adopted in the taxonomy of fishes. In many cases, intraspecific and even intragenetic hybridization has been reported. We have attempted to make the system sufficiently flexible to accommodate the differing taxonomic bases and still retain our concern for gene pool contamination which might threaten the integrity of a taxon.

The potential for gene pool contamination is a consideration in establishing the priorities with which to guide the Endangered Species Program. Potential contamination has as its base incomplete evolution of a genetic or behavioral

barrier to interbreeding with closely related, sympatric species or subspecies. Mayr (op. cit. p. 15) discussed this and points out that many examples are known of species formed by geographic isolation that become "fused" again with the parental species. If we concern ourselves with the threat of a population "fusing" again with the parental species, we may be managing against normalcy.

Perhaps the greatest justification for attempting to counteract this process would be a case where an artificial introduction has been made of a species not indigenous to the range of the endangered species we might wish to protect. Even here, one must recognize the great difficulty in attempting to counteract this kind of blunder.

#### THE NUMERICAL SCORE

The numerical score indicates the status of the species as determined within the previously stated conceptual framework of the priority system. It is not a "magic number" but a guide to be used to list animals according to degree of endangerment. The score may also partially indicate our general lack of knowledge about the species, animals like it, or certain areas of natural science. It may reflect a fundamental insensitivity of the system to cope with the array of differences in biological characteristics among the classes of animals. Because of these differences, it is our judgment that separate lists should be compiled for each class, and cross-class comparisons in priority ratings should not be made.

#### RESULTS OF TESTING THE SYSTEM

Four advanced graduate students with differing backgrounds were employed to score 180 species or subspecies using the second version of the priority system, with the 1973 edition of "Threatened Wildlife of the United States" as a standard data source. Objectives of this test were (a) to evaluate the performance and utility of the system for the diverse array of threatened animals; and (b) to evaluate the quantity, quality, and method of presentation of data in the standard data source with respect to coordination with the priority system. Variables analyzed were: (1) the four individual scorers; (2) the four sections of the priority system; (3) the four taxonomic groups (reptiles and amphibians, fish, birds, mammals); (4) the unknown component of the scores for each animal; and (5) recurring problems with the use of the priority system and the soundness of the standard data source.

A spread of average scores from 32-78 for the 180 animals indicated a reasonable level of discrimination within the test. Three of the scores were similar in their scoring, but one responded to the system with lower scores, a low rate of use of the unknown component, and an infrequent use of problem categories. Average scores given each taxa were similar, but not enough mammals (17) nor reptiles and amphibians (8) were scored to conclude whether the system is biased on a taxonomic basis. None of the four sections of the system seem to be biased toward a higher or lower score. Some of the more celebrated endangered species like the California condor, red wolf, peregrine falcon, and Indiana bat received relatively high scores with low unknown components. More confidence is warranted for priorities based on these scores than for lesser known species for which information is lacking. Unknown scores were a greater part of the total scores for fish and reptiles and amphibians, indicating a difference in quantity and quality of data for taxonomic groups.

Sample scores presented in Table 1 are based on an earlier version of the priority system and used the 1973 Edition of Threatened Wildlife of the United States as a standard data source. Scores are presented here to demonstrate the typical output of this priority system, but do not represent an up-to-date assessment of the species scored.

TABLE 1.—SELECTED SCORES FOR EXAMPLES OF THREATENED OR ENDANGERED ANIMALS FROM 4 CLASSES, AVERAGE SCORES<sup>1</sup> BY 4 SCORERS, USING THE 1973 EDITION OF "THREATENED WILDLIFE OF THE UNITED STATES" AS A STANDARD DATA SOURCE

|   | Total | Unknown |
|---|-------|---------|
| <b>Birds:</b>   |       |         |
| Masked bobwhite, <i>Colinus virginianus ridgwayi</i> .....      | 52    | 8       |
| Southern bald eagle, <i>Haliaeetus eucocephalus</i> 1.....      | 58    | 5       |
| American Peregrine falcon, <i>Falco peregrinus anatum</i> ..... | 63    | 2       |
| Kirtlands warbler, <i>Dendroica kirtlandii</i> .....            | 66    | 8       |
| Large Kauai thrush, <i>Phaeornis obscurus myadestina</i> .....  | 71    | 19      |
| Eskimo curlew, <i>Numenius borealis</i> .....                   | 76    | 37      |
| California condor, <i>Gymnogyps californianus</i> .....         | 80    | 3       |
| <b>Fishes:</b>  |       |         |
| Devils Hole pupfish, <i>Cyprinodon diabolis</i> .....           | 56    | 12      |
| Gila trout, <i>Salmo gillae</i> .....                           | 61    | 11      |
| Mohave chub, <i>Siphateles mohavensis</i> .....                 | 68    | 32      |
| Maryland darter, <i>Etheostoma sellare</i> .....                | 70    | 32      |
| Colorado River squawfish, <i>Ptychocheilus lucius</i> .....     | 75    | 25      |
| Longjaw cisco, <i>Covegonus alpenae</i> .....                   | 80    | 33      |
| <b>Mammals:</b>   |       |         |
| Key deer, <i>Odocoileus virginianus clavium</i> .....           | 47    | 9       |
| Utah prairie dog, <i>Cynomys parvidens</i> .....                | 53    | 9       |
| Eastern timber wolf, <i>Canis lupus lycam</i> .....             | 60    | 13      |
| Florida manatee, <i>Trichechus manatus latirostris</i> .....    | 61    | 27      |
| Indiana bat, <i>Myotis sodalis</i> .....                        | 67    | 9       |
| Red wolf, <i>Canis rufus</i> .....                              | 73    | 14      |
| <b>Reptiles and amphibians:</b>                                 |       |         |
| American alligator, <i>Alligator mississippiensis</i> .....     | 56    | 11      |
| Blunt-nosed leopard lizard, <i>Crotaphytus silus</i> .....      | 62    | 15      |
| Desert slender salamander, <i>Batrachoseps aridus</i> .....     | 74    | 36      |
| Houston toad, <i>Bufo houstonensis</i> .....                    | 75    | 12      |

<sup>1</sup> Scores based on an earlier version of the priority system. These scores are not necessarily indicative of the current status of these species.

Two recurring problems with the standard data source were (1) insufficient information on which to make a judgment; and (2) the lack of consistency in the manner of presentation of available knowledge. Individual scorers interpreted the same source data differently and produced divergent scores on the same animal. We propose that a standard data source is essential for the priority system to work efficiently. Data on population status, vulnerability, recovery potential, and taxonomic status should be presented in the standard data source with consistent terminology. Value judgments based on available data should be made before information is entered into the data source, so that a scorer using the system doesn't have to read a narrative and decide, for example, whether it indicates that habitat is increasing or decreasing. The use of common descriptors, that are precisely defined, to indicate biological facts about each animal would allow for regular updating of the data base.

A new edition of "Threatened Wildlife of the United States" could serve as a standard data source if a format is adopted that matches the priority system and uses consistent terminology. Comprehensive literature reviews, contact with scientific experts, and regular interchange with private, state, and federal agencies and organizations would keep this data source up to date. Storage of information in a computer would provide a mechanism for regular updating and retrieval of information on the status of each species, and, in fact, will be necessary to handle the huge volume of data on the diverse array of threatened animals and plants. Regular periodic printouts in the form of editions of "Threatened Wildlife of the United States" would allow review by all concerned of the basis on which decisions are made for action on endangered species.

#### USING THE PRIORITY SYSTEM TO MAKE DECISIONS FOR ACTION

The first step in using the priority system in the Endangered Species Program is to score each animal with the numerical ranking system. These scores will be used to list animals in rank order of endangered status. This status does not change with an ability or lack of ability to take specific management steps, and it should not. The status of the animal and the need for management should be reflected by its position on the endangered list, but action will partly be determined by the entire program itself. These two expressions of priority should be kept separate.

The second step of taking action to alleviate the threats to a species' existence will be influenced by political, economic, social, and biological factors. Certain biological considerations which make an animal score high in endangered status may result in a lower priority for management action. For example, an animal with a low potential for population growth may score high in endangered status, but another species which offers a better chance of a quick, complete recovery may be chosen for immediate action. Administrative decisions for action regarding each species should be made on the basis of degree of endangerment whenever possible, but this will not always occur.

The following outline presents some considerations in action decisions which go beyond the use of numerical scores from the priority system:

#### *A. Aspects of the total program which affect decisions for action*

1. *Public interest.*—A high interest species (e.g. bald eagle) may bring attention to the entire program and may demand action, but likewise the low interest species *needs* support.

2. *Cooperative program potential.*—Existing or easily established state, Federal, or private programs may be able to carry much of the load and enhance chances for success.

3. *Continuity of program.*—Existing programs showing significant chances for long-term success should be carried to completion, but no action should be continued solely because it is already underway.

4. *Reliability of information.*—Where data are scarce, action should be aimed at gathering information needed for sound decision-making. In an emergency, human judgment must be the basis for decisions.

5. *Budget considerations.*—When funding levels cannot handle all species, animals with the most urgent management needs and a high chance for successful recovery will receive highest priority for action. A balance will have to be achieved between spreading finances to do some work on several species, and substantial investments to materially assist a single species.

#### *B. Likelihood of success*

1. *Biological capacity to respond to management.*—Generally, animals with a high turnover rate which are capable of adapting to managed environments offer the highest likelihood of success and may receive higher priority for action.

2. *Capacity of habitat to support the animal.*—Changes in land management on public lands, private lands under subsidy, or purchase of land-types not in great demand may be easiest to provide. The presence of such unusual obstacles as pesticides, total absence of needed habitats, or exotic predators or competitors may offer the least likelihood of successful management.

3. *Relative costs and benefits.*—The mandate of the 1973 Act indicates that attention will be paid to all species, but funding levels necessary to manage all endangered species are unlikely. It is more likely that priorities set with the aid of this system will be balanced against the probability of significant chances for success with moderate dollar investment.

#### CONCLUSION

A priority system to aid making decisions in the endangered species program, based on determinations of the imminence of the threat to the animal, is offered for review. This system ranks endangered status of species on the basis of population status, vulnerability, recovery potential, and special attributes of the species. The system is designed to assist in setting priorities for action to reduce the threat to the species, but it does not replace human judgment. A standard data base is suggested for using the system, to provide consistency in dealing with the huge volume of data on endangered animals, and to allow input from private, state, and federal agencies and organizations. Continuing input from these sources and repeated use of the system will accommodate changes in the data base and will aid in assuring cooperative efforts directed at the ultimate goal of an endangered species program: to remove species from the endangered list.

#### ACKNOWLEDGMENTS

Gene Ruhr attempted to construct a priority system prior to this one, and provided ideas and criticism at several stages. Keith Shreiner provided fre-



quent encouragement to proceed with development of a usable system. More than 40 biologists critiqued the priority system, and their ideas, plus ideas offered by many other biologists over the last two years, have been carefully considered in producing this draft of the system. We are grateful to all of these people for their help and encouragement.

## [ATTACHMENT 2]

TABLE 1.—Priority list of endangered species indicated in the test "Evaluation of Endangered Species Priority System" by Dr. Rollin D. Sparrowe.

| Species by common name                |  | Priority score |
|---------------------------------------|--|----------------|
| <b>Fish:</b>                          |  |                |
| Tecopa pupfish.....                   |  | 69. 50         |
| Blue pike.....                        |  | 68. 25         |
| Shortnose sturgeon.....               |  | 66. 75         |
| Moapa dace.....                       |  | 66. 75         |
| Pahrump killifish.....                |  | 66. 50         |
| Comanche Springs pupfish.....         |  | 65. 25         |
| Owens pupfish.....                    |  | 65. 00         |
| Pecos gambusia.....                   |  | 64. 25         |
| Longjaw cisco.....                    |  | 63. 75         |
| Greenback cutthroat trout.....        |  | 63. 50         |
| Colorado squawfish.....               |  | 62. 75         |
| Woundfin.....                         |  | 60. 75         |
| Okaloosa darter.....                  |  | 60. 25         |
| Pahranagat bonytail.....              |  | 59. 75         |
| Watercress darter.....                |  | 59. 50         |
| Gila topminnow.....                   |  | 59. 50         |
| Fountain darter.....                  |  | 57. 50         |
| Clear Creek gambusia.....             |  | 56. 50         |
| Paiute cutthroat trout.....           |  | 56. 25         |
| Cui-ui.....                           |  | 55. 75         |
| Lahontan cutthroat trout.....         |  | 55. 50         |
| Gila trout.....                       |  | 55. 25         |
| Warm Spring pupfish.....              |  | 54. 75         |
| Arizona trout.....                    |  | 54. 50         |
| Unarmored threespine stickleback..... |  | 54. 50         |
| Big Bend gambusia.....                |  | 54. 25         |
| Maryland darter.....                  |  | 53. 50         |
| Mohave chub.....                      |  | 52. 50         |
| Devils Hole pupfish.....              |  | 50. 25         |
| Kendall Warm-Springs dace.....        |  | 49. 25         |
| Humpback chub.....                    |  | 48. 00         |
| <b>Reptiles and amphibians:</b>       |  |                |
| Houston toad.....                     |  | 68. 75         |
| Texas blind salamander.....           |  | 62. 50         |
| Desert slender salamander.....        |  | 55. 75         |
| Blunt-nosed leopard lizard.....       |  | 54. 00         |
| Puerto Rican boa.....                 |  | 53. 75         |
| San Francisco garter snake.....       |  | 52. 25         |
| American alligator.....               |  | 50. 50         |
| Santa Cruz long-toed salamander.....  |  | 50. 00         |
| <b>Birds:</b>                         |  |                |
| Santa Barbara song sparrow.....       |  | None           |
| California condor.....                |  | 78. 25         |
| Puerto Rican parrot.....              |  | 77. 25         |
| Akiapolaau.....                       |  | 69. 25         |
| Palila.....                           |  | 69. 00         |
| Kauai Oo.....                         |  | 67. 75         |
| American ivory-billed woodpecker..... |  | 67. 75         |
| Kauai akialoa.....                    |  | 67. 00         |
| Hawaii akepa.....                     |  | 65. 75         |
| Hawaiian crow.....                    |  | 65. 50         |
| Maui akepa.....                       |  | 65. 25         |
| Crested honey creeper.....            |  | 65. 00         |
| Molokai thrush.....                   |  | 64. 25         |

| <i>Species by common name</i>            | <i>Priority score</i> |
|--|-----------------------|
| Oahu creeper .....                       | 63.75                 |
| Hawaiian hawk .....                      | 63.75                 |
| Ou .....                                 | 63.50                 |
| Bachman's warbler .....                  | 63.50                 |
| Puerto Rican whip-poor-will .....        | 63.50                 |
| California brown pelican .....           | 63.25                 |
| Molokai creeper .....                    | 63.00                 |
| Maui parrotbill .....                    | 62.50                 |
| Florida Everglade kite .....             | 62.50                 |
| Dusky seaside sparrow .....              | 61.75                 |
| Mississippi sandhill crane .....         | 61.75                 |
| American peregrine falcon .....          | 61.75                 |
| Kirtland's warbler .....                 | 61.50                 |
| Large Kauai thrush .....                 | 61.50                 |
| Hawaiian duck .....                      | 61.25                 |
| Kauai nukupuu .....                      | 60.25                 |
| Maui nukupuu .....                       | 60.00                 |
| Hawaiian coot .....                      | 59.60                 |
| Small Kauai thrush .....                 | 59.25                 |
| Whooping crane .....                     | 59.00                 |
| Puerto Rican plain pigeon .....          | 58.75                 |
| Eastern brown pelican .....              | 58.50                 |
| Cape sable sparrow .....                 | 57.75                 |
| Eskimo curlew .....                      | 57.75                 |
| Hawaiian gallinule .....                 | 57.00                 |
| Light-footed clapper rail .....          | 57.00                 |
| Southern bald eagle .....                | 55.25                 |
| Laysan duck .....                        | 54.50                 |
| California least tern .....              | 54.25                 |
| Hawaiian goose .....                     | 54.00                 |
| Red-cockaded woodpecker .....            | 53.75                 |
| Hawaiian dark-rumped petrel .....        | 53.25                 |
| Hawaiian stilt .....                     | 52.75                 |
| Arctic peregrine falcon .....            | 52.25                 |
| California clapper rail .....            | 51.75                 |
| Mexican duck .....                       | 51.75                 |
| Aleutian Canada goose .....              | 50.25                 |
| Attwater's greater prairie chicken ..... | 50.00                 |
| Masked bobwhite .....                    | 48.00                 |
| Yuma clapper rail .....                  | 46.00                 |
| Nihoa millerbird .....                   | 38.00                 |
| Nihoa finch .....                        | 36.50                 |
| Laysan finch .....                       | 31.75                 |
| <b>Mammals:</b>                          |                       |
| Red wolf .....                           | 66.00                 |
| Black-footed ferret .....                | 62.75                 |
| Indiana bat .....                        | 62.25                 |
| Columbian white-tailed deer .....        | 60.00                 |
| Sonoran pronghorn .....                  | 57.25                 |
| Moro Bay kangaroo rat .....              | 56.75                 |
| Eastern cougar .....                     | 55.75                 |
| Salt-marsh harvest mouse .....           | 55.00                 |
| Eastern timber wolf .....                | 53.75                 |
| Northern Rock Mountain wolf .....        | 53.00                 |
| San Joaquin kit fox .....                | 49.75                 |
| Florida panther .....                    | 49.50                 |
| Utah prairie dog .....                   | 48.25                 |
| Delmarva Peninsula fox squirrel .....    | 47.75                 |
| Florida manatee .....                    | 47.25                 |
| Key deer .....                           | 42.75                 |
| Hawaiian hoary bat .....                 | 41.50                 |

## [ATTACHMENT 3]

## ENDANGERED SPECIES PRIORITY SYSTEM

This system attempts to evaluate and rank Endangered and Threatened species with regard to their relative state of vulnerability to extinction and/or further depletion, taking into consideration as well their taxonomic and ecosystem significance. The rather subjective ranking obtained will presumably reflect the relative importance or "priority" of any given species status as compared to others. Such a priority ranking will serve merely as a base to help decide which species are most in need of attention and where effort and monies should be directed. One must realize, however, that the final decision as to which species actually do receive attention must rest upon a number of other factors, not the least of which is simply a practical assessment of needs in relation to total monies and manpower available.

The system's core are four primary factors which reflect a species current "Biological Vulnerability". (I). These are (A) current population status, (B) critical habitat status, (C) reproduction capabilities, and (D) adult mortality. Evaluation criteria are scored in "points" on an almost exponential scale relative to the increasingly critical state identified for each criterion.

"Taxonomic Significance" (II). is used as a weighting factor. For example, the single species of a genus or family should receive much more attention than a species belonging to a genus with many species.

"Ecosystem Significance" (III) is of lesser importance, but still worthy of consideration. It is used as an additive factor, each category bearing a given number of "points".

A total "score" for each species is obtained by multiplying the total Biological Vulnerability "points" by the Taxonomic Significance "factor" and adding the "points" indicated by the Ecosystem Significance. The score for each species is then used to rank all species under consideration as to relative "biological status." The system could be used within any biotic unit as desirable: for example, within family, order, class, phylum, or kingdom. Although basically designed for these species currently on either the "Endangered" or "Threatened" lists, the system might well be used for "candidates" as well. One must keep in mind, however, that this priority system is merely a subjective tool, and other judgments must prevail ultimately in the final-decision process relative to expenditure of time and money.

*I. Biological vulnerability*

This element is the primary basis used to evaluate the "biological status" of a given species. The four factors mentioned above—(A) Current Population Status, (B) Critical Habitat Status, (C) Reproductive Capabilities, and (D) Adult Mortality—are believed to be the only ones needed for this determination.

## A. CURRENT POPULATION STATUS

This factor rates a species current population status through an assessment of several interrelated variables. These include current and past population size and trend, proportion of available habitat presently utilized, vulnerability of the species to environmental change, and proximity to extinction.

## Evaluation criteria:

|   | <i>Points</i> |
|---|---------------|
| 1. Little or no reduction in numbers/distribution; population(s) not especially vulnerable nor threatened.....  | 0             |
| 2. Significant reduction in numbers/distribution, but population(s) strong, viable, and relatively stable or increasing, occupying most of available habitat..... | 5             |
| 3. Little or no reduction in numbers/distribution; but population(s) small, vulnerable, and/or threatened.....  | 25            |
| 4. Significant reduction in numbers/distribution; present population(s) declining steadily, and are vulnerable or threatened.....                                 | 100           |
| 5. Severe reduction in numbers/distribution; near extinction; and/or population(s) highly vulnerable or highly threatened.....                                    | 500           |

## B. CRITICAL HABITAT STATUS

This factor takes into account the present and past trends in reduction or alteration of the species' critical habitat. The vulnerability of the critical habitat to any foreseen or unforeseen environmental threat is also taken into account, as should be the severity of any foreseeable threat to the critical habitat.

## Evaluation criteria:

|   |             |
|---|-------------|
| 1. No significant reduction and/or deterioration evident; not especially vulnerable or threatened.....  | Points<br>0 |
| 2. Significant reduction and/or deterioration, but remaining habitat adequate for sustaining strong, viable population(s) and not especially vulnerable to or threatened with further significant losses..... | 5           |
| 3. No significant reduction and/or deterioration evident, but habitat limited, vulnerable, and/or threatened.....   | 25          |
| 4. Significant reduction and/or deterioration; available habitat declining steadily and is vulnerable or threatened.....  | 100         |
| 5. Severe reduction and/or deterioration; approaching total loss; remaining habitat highly vulnerable or highly threatened.....   | 500         |

## C. REPRODUCTION CAPABILITIES

This factor considers all aspects of reproduction up to reproductive maturity. The inherent reproductive potential of the species is also taken into account. Any evidence that reproduction is abnormally low due to present circumstances is cause for a higher point accumulation in this factor. Fertility, viability, natality, and pre-adult losses should all be taken into account, if known. Of critical overall concern is whether or not reproduction is adequate to insure constant replacement of reproductive individuals in order to maintain or increase current population levels.

## Evaluation criteria:

|  |             |
|--|-------------|
| 1. Reproductive potential high, intermediate, or low; net productivity normal and reasonably constant, not especially sensitive to adverse environmental conditions..... | Points<br>0 |
| 2. Reproductive potential high or intermediate, but net productivity variable and somewhat sensitive to adverse environmental conditions.....                            | 5           |
| 3. Reproductive potential low; net productivity variable and somewhat sensitive to adverse environmental conditions.....   | 25          |
| 4. Reproductive potential high, intermediate, or low; net productivity significantly below normal, and sensitive to adverse environmental conditions.....                | 100         |
| 5. Reproductive potential intermediate or low; net productivity far below normal, and sensitive to adverse environmental conditions.....                                 | 500         |

## D. ADULT MORTALITY

The factor considers whether adult mortality occurs at what might be expected to be normal rate and variability, or whether mortality rates are abnormally high or unpredictable.

## Evaluation criteria:

|  |             |
|--|-------------|
| 1. Mortality in reproductive segment of population consistently normal and reasonably constant; approximately equals or is less than increment of sexually mature individuals.....       | Points<br>0 |
| 2. Mortality in reproductive segment of population somewhat variable, sometimes significantly greater than normal, and sometimes exceeding increment of sexually mature individuals..... | 5           |
| 3. Mortality in reproductive segment of population variable, commonly greater than normal and exceeding increment of sexually mature individuals.....                                    | 25          |
| 4. Mortality in reproductive segment of population variable, but mostly greater than normal and frequently exceeding increment of sexually mature individuals.....                       | 100         |
| 5. Mortality in reproductive segment of population consistently greater than normal and greatly exceeding increment of sexually mature individuals.....                                  | 500         |

*II. Taxonomic significance**Points*

|   |   |
|---|---|
| 1. One of several species in polytypic genus..... | 1 |
| 2. One of several species in polytypic.....       | 2 |
| 3. Monotypic genus.....                           | 3 |
| 4. Monotypic family or higher.....                | 4 |

*III. Ecosystem significance**Points*

|   |     |
|---|-----|
| 1. Not a member of endangered or threatened ecosystem.....    | 0   |
| 2. Member of a significant, but not threatened ecosystem..... | 100 |
| 3. Member of a unique, threatened, ecosystem.....             | 300 |
| 4. Member of a very unique, endangered ecosystem.....         | 500 |

This additive category is meant to consider both the geographic limitation and the vulnerability or the species' ecosystem(s) to natural or man-wrought environmental change.

## PROCEDURE

1. Score points from biological information.
  2. If unknown select modal points.
  3. Add points for IA-D.
  4. Add points for II.
  5. Multiply I and II.
  6. Add score for III to Total of I and II.
- Possible scores range from 0-20500.

Mr. BONKER. Thank you.

Let us move on to section 8, international cooperation.

Mr. Bohlen testified on Wednesday that the U.S. market was closed to importation of the endangered species listed in the convention.

Could you explain how the market is closed, given the fact that we are not prepared to enforce the convention?

Mr. PARSONS. Mr. Chairman, I can try to answer that question.

As it is stated here, my impression of what Mr. Bohlen said, is that the U.S. market would be closed to those animals listed in the convention, and he referred to an interim procedure, which we had drafted, and which we hope to implement very shortly, pending the approvment of the management authority and scientific authority, and the draft Executive Order.

Mr. SPENSLEY. I have to correct you, and I did reread the testimony before we posed this question.

Mr. Bohlen did state that as a practical matter the market is now closed.

Mr. PARSONS. What I believe he would have meant is that most of the animals which are in the trade are already listed under our Endangered Species Act, and their importation is prohibited.

We are fully aware that there are 216 species on appendix 1 which are not listed on our Endangered Species Act, and which we propose to list.

I cannot tell you offhand whether some of these are significantly involved trade as opposed to the ones that we have already listed.

I do know that we have an interim procedure plan, which will be in effect until such time as we have the management authority as planned in the convention.

I believe there are only two countries issuing the permits at the present time, Canada and Switzerland. This puts us in an odd position when we try to prosecute someone for something which they can not possibly get.

If I remember correctly, that would be a defense to most prosecutions. So there are a number of problems. But if I am correct in my assumptions that most of the species significantly involved in trade are already on the endangered species list, then Mr. Bohlen's statement stands.

Mr. BONKER. The Endangered Species Act of 1973 also implemented the convention on Nature Protection in the Western Hemisphere.

Can you tell the subcommittee what progress has been made toward exercising that authority?

Mr. SCHREINER. Mr. Chairman, the Executive order referred to, which will implement the Convention on International Trade as Endangered Species of Wild Fauna and Flora, also speaks to this convention.

It provides the implementing document for our full implementation of the so-called Pan-American Treaty, which is its common name. The Fish and Wildlife Service is in the process of establishing the organization necessary to fully implement that Convention, also.

Mr. PARSONS. I would like to point out that if you take a look at the Pan-American convention, the very passage of the Endangered Species Act itself, implemented most of the obligations to endangered species, because that is the law which protects the animals in our country that are endangered.

A lot of the rest of the convention has to do with provisions for parks and wilderness areas.

In a sense, the United States has, by a passage of the 1973 act, taken a big step forward in implementing that treaty which has been effective since 1942.

Mr. BONKER. Mr. Forsythe?

Mr. FORSYTHE. I believe Mr. Spensley has a question.

Mr. SPENSLEY. We are on question number 4, section 8.

Some months earlier, Mr. Dingell, the former chairman of this subcommittee, participated in a rather spirited exchange of correspondence with the Service concerning your utilization of the authority to use foreign excess currencies on behalf of endangered species in other countries.

If I recall correctly, the Service indicated it had rather specific and advanced plans in this area.

How many projects, using such funds, are now underway, and what results are you receiving?

Mr. SCHREINER. Mr. Counsel, we have been unable to obtain excess foreign currencies, as I testified on the first day that we were here.

We did try rather hard to participate in the established programs of the Smithsonian Institution and the National Science Foundation, and Interior's own foreign currency program. We were unsuccessful in that attempt.

Therefore, we are now making an effort to get our own excess foreign currency program, and as you know, our request was in OMB, and it has just recently been denied for this year, but we were heartened by the fact that they invited us to try again next year.

Mr. SPENSLEY. There is a question here addressed to Mr. Baysinger.

Since he evidently represented the United States on the committee that represented the Commission for the Animals—Mr. Baysinger, I understand you represented the United States on the committee that produced the list of animals for the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

I have heard allegations that that list has little basis in scientific fact.

Would you care to comment?

**STATEMENT OF EARL BAYSINGER, ASSISTANT CHIEF, OFFICE OF  
ENDANGERED SPECIES AND INTERNATIONAL ACTIVITIES, FISH  
AND WILDLIFE SERVICE**

Mr. BAYSINGER. I am Earl Baysinger, assistant chief, Office of Endangered Species and International Activities, United States Fish and Wildlife Service.

Sir, I take it by the list you mean the appendixes that I worked on?

There were a number of us representing the United States at the convention. I was one of the U.S. delegation involved in the working of the fauna committee, which produced the appendixes to that convention.

For background, the list that was produced was brought in part from a list circulated among the member nations of the IUCN for several years prior to the Conference. That list was rather small and a number of people at the conference, if my memory is correct, felt other species should be added.

The nations who participated were represented, in many cases, by competent, qualified scientists.

During the negotiations we started out with the basic list of species that had survived several years of review by the IUCN and other nations.

The procedure followed allowed any nation to nominate any species that occurred within its territory for consideration by the committee. The number of species nominated was quite large.

One must realize that the appendixes were being developed by the fauna committee at the same time the basic mechanics of the convention were being negotiated.

In developing the appendixes, we started with the IUCN list that had been circulated and had survived, this list was read, species by species, to the assembled fauna committee. Any member, including ourselves, who had any objection to any species, could so indicate.

A select panel of experts was then set up. It was essentially an ad hoc group represented by, among others, the International Council on Bird Preservation, the ICUN, ourselves, and the Smithsonian Institution, if I remember correctly. Any species that was challenged was referred to this panel, and they determined whether it should be included on the appendixes.

The same procedure was followed with any nominations from any other delegate there. There were some 50, I believe, lists of

species that were submitted as nominees for the various appendixes, and each of those species was again read to the fauna committee. Any challengers were then referred to the select panel.

I personally have some question as to whether every species that is on each appendix belongs there, or whether there should not be some exchanges between them. I think the appendixes are biologically sound.

I think at the time they were developed they were good candidates, and should have been considered.

Mr. SPENSLEY. Mr. Baysinger, would you suggest that the work that was done by the international convention, listing these species, should not have been implemented or should the list of the species listed in the convention have been added to our list immediately on proposed rulemaking fashion so that we could take some appropriate action?

The problem that really concerns me is the apparent redundancy of effort in this instance where we have had a number of experts around the world involved in the process of evaluating these various species; and a parallel situation which existed which we will get into in a couple of minutes, dealing with the Smithsonian's work in the plant area. It makes little sense that once these lists are proposed to the Department, that we have to spend a great deal more time reinventing the wheel by going back and reevaluating each of these lists when a number of eminent experts have already expressed their best opinion that these should be placed on the endangered or threatened list.

Mr. BAYSINGER. If I understand your question correctly, of course one has to consider that the criteria for the appendixes are somewhat different than for the endangered species list.

However, we have proposed all of those species, and I stand to be corrected by some of the gentlemen in the audience, I believe we have proposed all species that appear on appendix I on the convention that are not on the lists promulgated under the list for addition to the list as endangered species.

Mr. SPENSLEY. Maybe Mr. Schreiner might want to comment on the same question given the same situation with the Smithsonian Institute work in the listing of plants.

Is the Department restudying all of these recommendations that were made?

Is there some redundancy of work involved there?

Mr. SCHREINER. First. I would like to address the conventions appendix.

It is true that we have proposed to list the 216 species on appendix I that are not currently on the U.S. list. Better than half of them already were on our list.

The International Union for the Conservation of Nature and Natural Resources, has a list of endangered and threatened species, but it is not called exactly that. It is roughly equivalent to our list. I found that of those species which we do not have listed in the United States that are on appendix I, of the convention, very few are listed by the International Union either as endangered or threatened.

Now, there could be at least two reasons for that.



One would be that they have never considered those species for one reason or another, which I doubt. The second reason could be that they were considered and it was found that they do not qualify.

Although I do not recommend an exhaustive study of these species. I do think it would be worthwhile to at least check with the world experts on these species to obtain their current views on whether or not they qualify for the U.S. list.

With regard to plants, again the Smithsonian Institution, in my opinion, did a tremendous job in compiling that list, and I think they are to be heartily commended for their effort.

They went through a long list of species and they supplied us with a large group of candidate species for listing.

The Endangered Species Act, however, requires that the appropriate Secretary make this determination, and though I propose no species by species check of what the Smithsonian has done, I do feel that the Interior botanists must check the Smithsonian Institution files to verify the existence of the information which qualifies them legally for the list under the Endangered Species Act of 1973.

If given that assurance by the botanists, I am prepared to go ahead with it.

Mr. SPENSLEY. That work is in progress right now?

Mr. SCHREINER. Yes, sir, I believe it is.

Mr. MANNINA. Mr. Schreiner, I would like to follow up on a couple of questions.

Last week in response to Mr. Forsythe's question you stated that the Department was going back to square one in handling those species on the Smithsonian's list. It seems strange to me that you are going to conduct another review all this scientific data. It is my understanding that you have received no criticism of the scientific data in terms of its content or methodology. In fact as I understand it, the only criticism of the report you have received is that it has not listed enough species.

Considering this could you elaborate a little further on your statement of last week.

Mr. SCHREINER. Yes, Mr. Counsel.

If I said we were going back to square one, I did not intend to say that or mean it in any sense of the word. What I suggested was that we should look at the data, and this should not take a long time, in the Smithsonian Institutions proposal which supports the listing of these plants.

Our botanists, in other words, should look at that data. If they tell me it is adequate to support the listing, then I am prepared to go ahead without the administrative record normally required but on the basis of the verified Smithsonian record.

Now, again, the act authorizes only the Secretary of the Interior or Commerce to make this determination. No one else has this authority.

Mr. MANNINA. Will your botanists be consulting outside experts or will they simply be reviewing the data itself that they have?

Mr. SCHREINER. I would hope that they could review the data quickly, and where it clearly supports a listing, that is sufficient.

I am not familiar with the exact nature of the data used.

Let us assume, though, that for some species it is not as extensive as for others. That would be likely with animals. Let us say it is even sketchy in some cases.

In this case additional investigation might be necessary in the case of some species to fully confirm or deny that they are qualified for either the endangered or threatened list.

Mr. MANNINA. Mr. Schreiner, you used the word "quickly" several times.

We have come to learn that the Department's definition of quickly is somewhat different than this committee's.

Could you indicate how long you anticipate it will take to complete the review process.

Mr. SCHREINER. I agree that quickly is a relative term, and I would like my botanist to answer your question, if he will, because he has a much better idea of the scope of the review that he will have to conduct.

Dr. MacBryde.

Dr. MACBRYDE. Thank you very much, Mr. Counsel.

I concur with Mr. Schriener. The Smithsonian report was assembled under tremendous odds. The act required them to produce the document in 1 year. The Smithsonian Institution coordinated a review of all vascular plants in the United States, some 22,000 taxa, to prepare their list of 3,187 candidates.

I think we can have a list which I would like to see taken as a proposed rulemaking—this is partly with the Smithsonian's continued good help—certainly by December for the majority of the plants on their report.

Mr. MANNINA. This year.

Dr. MACBRYDE. Yes; this year.

The Smithsonian is very actively revising their entire report right now. This is one reason why I can suggest this date. The majority of the plants on their report are already with adequate data for plant conservation purposes.

There has been somewhat of an evolving philosophy in the Fish and Wildlife Service and our Office regarding the plant program, which is only some 4 months old in Interior.

We are finding out what the Smithsonian Institution's data are, and what comments many others in the botanical community have on these plants. And the Smithsonian is revising their report. And we have the feedback on the plants from the Federal Register notice of July 1. This is all refining the list of candidates rather fast.

Mr. MANNINA. I understand the gentleman from the Smithsonian in the back and he would also like to comment.

Dr. AYENSU. My name is Edward S. Ayensu. I am the Chairman of the Botany Department and Director of the endangered flora project at the Smithsonian Institution.

It was under my direction that you received this report.

An impression has been created here that I think should, in a sense, be corrected. That is, Mr. Schreiner says the report was put together rather hurriedly.

I want to assure you that this report was put together, not only by the Smithsonian's staff, but by a number of botanists in the country. Quite a lot of people were involved in the production of the report.

In fact, what it boils down to is the question of the amount of man-hours that was put into screening the 20,000 odd species. So it was not, in any sense, put together hurriedly.

There is a lot of data backing these species. My colleague, Dr. MacBride, will tell you that he has seen a lot of the backup information that went into the preparation of this report.

We have, in fact, submitted to Interior documented information, at least on the commercially exploited species that are listed separately in this report which, in my opinion, should be in the books.

About the questions that have been raised regarding revisions and so on; up to this very minute we have compiled changes that have come in from various scientists. They have been reviewed, sent out to experts in the field. I may add that we have been using a lot of the experts in this country and abroad who are specifically knowledgeable with specific plant families and plants in general.

So, no impression, in a sense, should be left in this room or to this committee that anything was done very hurriedly.

There is a lot of good data backing it.

I would add that we feel strongly that the report that you have in front of you contains enough backup information of Interior to act on it.

If there are any changes, it is 0.006 percent of changes that we have had so far for the entire report that has been presented to you. It is much more adequately documented than perhaps many of the animal material. Thank you.

Mr. FORSYTHE. That raises a point that puzzles me somewhat.

Could you elaborate on the meaning of the phrase "exploited species."

Mr. SCHREINER. Mr. Forsythe, before answering your question, I would like to say that if, in any way, I offended Dr. Ayensu, it was unintentional.

I have the greatest respect for him professionally and for his staff, and without their help we would be nowhere. There was no offense intended.

In fact, I think they did a tremendous job, and I want to be the first one to say so.

Now, with regard to the exploited species of plants, there are many different forms of exploitation.

However, the Smithsonian list, as I understand it, does contain a group of those plants that are being most heavily exploited at the present time, and it is our intent to work on those first.

Mr. SPENSLEY. Mr. Schreiner, I think that during the first day's testimony, either you or Mr. Greenwalt—I do not recall which—indicated that you have a priority system, in which animals have priority over plants.

Would that testimony indicate that you do not have a priority system for plants as such?

Mr. SCHREINER. Yes, sir, we do not have a priority system for plants of the type that we have for animals.

However, as stated, obviously those that are being most heavily exploited would have to be high on anyone's list of priorities.

Mr. SPENSLEY. Do you believe the 1973 amendments to the act are adequate to deal with the listing of endangered or threatened—

Mr. SCHREINER. I believe they are adequate with regard to listing, but not necessarily with anything else that might have to be done with plants.

Mr. SPENSLEY. Does that mean that you would not use section 7, for example?

Mr. SCHREINER. No, sir.

In the future we intend to combine species listing with the listing of critical habitats. I think the law is adequate in that respect.

It is not clear as to whose job it is to provide protection for plants, who will do the import-export checking, who will do the interstate checking, who will develop programs to save endangered plants, and those kinds of things.

Mr. SPENSLEY. So you would not require a State to have a conservation program for endangered plants?

Mr. SCHREINER. As we read section 6, that is not required at present.

Plants are not required to be included State cooperative effort.

Mr. BONKER. We will move on to section 17 of the rules and regulations, Captive Self-Sustaining Populations.

Factor 4 refers to a number of generations that the species have been successfully propagated in captivity.

How many actual generations can you expect this to turn out to be and how was the figure arrived at?

Mr. SCHREINER. Mr. Chairman, I would like to ask Mr. Baysinger to respond to that question. He is the primary author of this concept and has had the most experience with it to date.

I wonder if we might ask him to come up and respond to that question.

Mr. BONKER. Yes.

Mr. BAYSINGER. Thank you.

Yes; we have established several criteria for what we are calling captive self-sustaining populations one of which you outlined.

Our main concern is to be certain that prior to a determination that a species has a population capable of sustaining itself in captivity, that there has been at least two or three generations of that animal have been bred in captivity.

There are many species which will reproduce in captivity.

The question is then, if you have two youngsters, a male and a female both in captivity, can you, in turn, get those to mate and produce offspring and so on and so on.

Our concern is whether, when we make such determinations that we do in fact, have a self-reproducing population that is likely to go on for several generations.

Does that answer your question.

Mr. BONKER. Yes.

Mr. SPENSLEY. Mr. Baysinger, is it the intention of the Service to further define some of the factors that are in that list for defining self-sufficient captive?

Mr. BAYSINGER. We have been working with zoological personnel such as Dr. Seal who addressed the committee the other day, for about 2 or 3 years. As a matter of fact, the concept of separate treatment for captive self-sustaining populations is derived, in part, from his bank of data on species in captivity.

We like to think our activities and his will dovetail quite nicely. I expect there will be some polishing of those published criteria but those who know more about this subject than I seem to think they are fairly adequate.

Mr. SCHREINER. Mr. Chairman. if I might add to that, I was very pleased to see the report the Dr. Seal gave at this hearing. It seems to me that he may have already partially developed the criteria for determining the viability of a population, that, the relationship of the population's size, birth rate and death rate.

Mr. BONKER. On that same subject, you envision the proposals to designate individual species will be published in the Federal Register, thereby giving opportunity for people, organizations to comment?

Mr. SCHREINER. Yes, sir, we do, exactly in the same way that an endangered or threatened species is listed, that is, with a proposed rulemaking, a comment period and a final rulemaking.

Mr. STEELE. Mr. Chairman, I am George Steele of the Zoological Action Committee.

On this self-sustaining population list, what is the Department's time frame?

When do they anticipate the director will make the finding of the initial group to be included?

Mr. BONKER. Do you care to respond?

Mr. SCHREINER. As soon as we can, Mr. Chairman, but let me ask Mr. Baysinger to speak to that also, if he will, because he is more familiar with what is involved in getting the job done.

Mr. BAYSINGER. Thank you.

Mr. Chairman. For sometime now we have been talking about this problem with those people who maintain endangered species in captivity.

We already have several nominees, including half a dozen or so endangered pheasants that are commonly propagated in captivity. We expect to have a proposed rulemaking within 60 days or thereabouts.

We have also been advised, primarily by Dr. Seal, that a number of large cats, including Jaguars, possibly tigers and others may have captive self-sustaining populations.

We have asked Dr. Seal to extract that data from his files and furnish it to us, and he has indicated that he will do so. He has data in his file for most species of mammals in captivity.

Mr. STEELE. Does that mean that it could easily be 4 to 6 months before we could get the first designated captive sustained population?

Mr. BAYSINGER. I would like to think that it will be sooner than that, Mr. Mannina, perhaps as short as 3 months for the first determination, and then from there you get the pump primed and accumulate the data as it is forthcoming.

The 60-day comment period and drafting time will be major factors.

Mr. BONKER. Thank you.

Mr. SCHREINER. We have a copy of the permit issuance procedure for endangered species. It is in section 10(a), and we would like to refer this question to Mr. Parsons and ask him to explain more thoroughly the permit procedure for the committee.

Mr. PARSONS. I would be glad to.

The permit procedure is a fairly simple one, as you can see from the chart that you have, and I would like to follow it through and explain it as I go.

Before I start, let me make one reference.

Mr. Gene Hester of our Law Enforcement Division, who is in charge of the Permits Branch, is in the audience, and if I make any inaccurate statements, or if there is anything to elaborate, I would be glad if he would.

Mr. BONKER. Are you the person responsible in the Department for drafting the regulations?

Mr. PARSONS. Yes sir, I am.

Usually there is an initial contact in some form or another from the applicant, indicating his interest. This communication is often with our Washington office, but it does not necessarily have to be.

Permits are available along with instructions from our various field offices.

After the contact is made, and there is some determination that a permit may be an appropriate action, application forms and a package are sent to the applicant. This usually contains the regulations, the statutes, a set of instructions, and leaflets which we call factsheets, which explain, in laymen terms, what these regulations mean.

After the applicant reviews this, it is up to him to send in and prepare the application. We use a standard form with numbered boxes, and it corresponds to an instruction sheet.

The applicant fills out the factsheet, and there is an attachment for the species kind of permit activity he desires.

He then forwards this application to us, with the appropriate processing fee, where required, and the application is then logged in, and the process begun of actually processing the application within our agency has begun.

The applications are received in the Law Enforcement Division, and receive their initial review there, to ascertain whether the proper information has been supplied.

At the same time, a copy of the application is sent to the Endangered Species Office, and they also give it an initial review. This review is primarily aimed at determining whether or not enough biological data have been supplied with the original to merit publication in the Federal Register.

We will not publish the application in the Federal Register if it contains only a minimum of information. We require the applicant to furnish enough data to permit the public to formulate informed comments and opinions on the application.

At this point the application may be rejected. That would happen in cases where the desired activity is not prohibited.

The act is complex, and there are a great many people who do not understand that certain activities are not prohibited by the act, and that they do not need a permit to do it.

There may be other cases in which a permit simply cannot be granted. An example of that might be an application for an economic hardship exemption for an animal which was listed under the 1969 act. Those economic hardship permits would not be available for those animals any longer.

Mr. SPENSLEY. Mr. PARSONS, do you have a list, or a publication of information, other than your factsheet, which you do send to people who inquire about the permits?

Mr. PARSONS. We send them the regulation, and we hope that—

Mr. SPENSLEY. The regulations are not always so easy to read, by the people who request them.

Mr. PARSONS. I get that comment a lot from people who call and talk to me about them. I really think that obviously the regulations have to be legally correct, and we all know that does not make them as readable as a novel. On the other hand, I think if someone takes the time and trouble to read them step by step, they are fairly clear.

Most of the regulations contain a preamble. We send them out because they are printed together, at least the one that is available to us.

But to answer your question directly, other than the factsheet and the regulations, no, we do not have, in the instruction package any other information available to permit applicants.

Mr. SCHREINER. If I simply might add a pertinent point here.

When a particular applicant has particular trouble filling out the application, we do our best to make a local lay enforcement officer available to home to help him with the process.

Mr. PARSONS. Not only that, but Mr. Hester can assure you that we spend a great deal of time on the phone with these people, and we also appear at meetings throughout the country, trying to explain these kinds of things.

If we find at this point in time that an application is incomplete, that is that some information is required that has not been supplied, we try to consolidate the various incomplete portions, that is, between our office and the Endangered Species Office, and go back at one time to the applicant, rather than hit him several times, with request for further information, and tell him where the application is incomplete.

It is then up to the applicant to supply the further information to us.

Mr. SPENSLEY. Do you have a horseback figure of what percentage of applications are incomplete on first submittal?

Mr. SCHREINER. If you will let me supply it for the record.

[The following was submitted:]

SUMMARY—ENDANGERED SPECIES PERMIT APPLICATION ACTIONS, DEC. 28, 1973 TO SEPT. 22, 1975

|   | Type               |                   |
|---|--------------------|-------------------|
|   | 10(a) <sup>1</sup> | 9(f) <sup>2</sup> |
| Total number issued.....  | 129                | 94                |
| Number for which additional information requested from applicant <sup>4</sup> ..... | 44                 | 29                |
| Percent returned.....   | 34                 | 31                |
| Total number denied <sup>3</sup> .....  | 9                  | 3                 |
| Number for which additional information requested from applicant <sup>4</sup> ..... | 4                  | 0                 |
| Percent returned.....   | 44                 | -----             |
| Total number abandoned <sup>3</sup> .....   | 30                 | 7                 |
| Number for which additional information requested from applicant <sup>4</sup> ..... | 30                 | 7                 |
| Percent returned.....   | 100                | 100               |
| Total number withdrawn <sup>3</sup> .....   | 45                 | 9                 |
| Number for which additional information requested from applicant <sup>4</sup> ..... | 16                 | 2                 |
| Percent returned.....   | 36                 | 22                |
| Total final actions.....  | 213                | 113               |
| Number for which additional information requested from applicant <sup>4</sup> ..... | 89                 | 38                |
| Percent returned.....   | 42                 | 33                |

<sup>1</sup> Permits are issued for exceptions to the prohibitions of Section 9 of the Act. These can be issued for scientific purposes or to enhance the propagation or survival of the species.

<sup>2</sup> Permit applications received under this section are exceptions to the requirement that all wildlife be imported through designated ports of entry for wildlife.

<sup>3</sup> Definitions: Denied—Permits which were not approved for issuance because of noncompliance with Federal regulation permit requirements and/or insufficient biological justification; Abandoned—Applicant did not provide additional information within 60 days of official notice that his application was incomplete; and Withdrawn—After submission of application, applicant requests it to be withdrawn.

<sup>4</sup> Does not include those for which information was requested from applicant by telephone.

Mr. SPENSLEY. I would also be interested in the same respect to percent of applications that are unnecessary, or inappropriate.

Mr. PARSONS. We do have some figures on that, too. I would not hesitate to say that the longer we are in this process the less applications come through incomplete. That is partly due to the process of educating our constituency out there, too.

Once it passes the initial review, and we have satisfied ourselves that the basic data is included, then it is published in the Federal Register, and we maintain copies of it in our files in Washington, which are open for public inspection, as well as any public comments we receive.

When the comment period is over, the comments are evaluated, and a final review takes place in both offices of endangered species and law enforcement.

At the end of this evaluation and review period, the length of which varies according to the complexity of the particular permit, the application is either denied or approved.

If it is denied, the applicant is so notified by the Office of Law Enforcement. If it is approved, the permit is drafted by the Law Enforcement Division, in consultation with the Endangered Species Office, particularly if there are some conditions that the Endangered Species Office feels ought to be in a given permit.

Once the permit is drafted, it is then signed and issued to the applicant.

Mr. FORSYTHE. We are now down to less than 4 minutes because of the quorum call and I hope we will adjourn. I also hope the staff is satisfied with your coverage.

This permit process, how long does it normally take?

Mr. PARSONS. It depends on the nature of the permit.

I believe the average, 10(a) permit, that is research or propagation permit, now takes approximately 90 days. Some take longer, and some are less.

You are aware that the 30-day comment period, of course, is a fair portion of that.

Mr. FORSYTHE. Subject to those that get lost in the bottom drawer.

Mr. PARSONS. We have a system so that we open the bottom drawer at least once a week, and we find all of those.

Mr. FORSYTHE. I would like to just comment. I know the chairman has indicated that we will be back, and we appreciate it.

For my part I think this whole process is helpful and I would like to say that I think you have done an amazing job in the short time that we have had this law implemented.

Mr. Chairman, I just wanted to add that on the record before we adjourned.

Mr. BONKER. Thank you, Mr. Forsythe, and the chairman wanted me to be sure to thank you for your cooperation and response to the many questions that have been asked in 3 days of sessions, that in about 3 months he would like to invite you back and to review the progress that you have made.

If there are no further comments, the subcommittee stands adjourned.

[The following material was submitted for inclusion in the record:]



U.S. FISH AND WILDLIFE SERVICE, COMMENTS ON THE STATEMENT OF THE  
AMERICAN FUR MERCHANTS ASSOCIATION

This response to the comments of Joseph Poser, President of the American Fur Merchants' Association, at the Endangered Species Oversight Hearings has been made in a minimum of time. Therefore, these comments are general in nature, especially as to the specifics of storage facilities, training, and particular incidents referred to in Mr. Poser's testimony.

Before beginning our comments on the specific points raised by Mr. Poser we would like to comment on his remarks concerning the attitudes of the personnel of the Fish and Wildlife Service in the New York area. He complains that the enforcement officers in that area treat the furriers as a criminal fringe whose motives are not to be trusted. We should remind the Committee that on February 21, 1973, a New York fur merchant's firm, Vesely-Forte, Inc., plead guilty to 50 criminal counts of purchasing and receiving illegal wild fur skins. In addition, 32 other fur merchants from the New York area, including Mr. Poser, signed a consent civil injunction, vowing not to violate Federal wildlife laws. Both the criminal and civil actions related to vast shipments of furs from various parts of the world which were either endangered species, or were furs from animals taken illegally in the country of origin. This case has led to several further investigations and both criminal and civil prosecutions of other fur companies in the New York area.

Notwithstanding this, our Special Agents in the New York area have not been engaging in a campaign to harass the furriers in the New York area. What has happened is simply an increase in the effectiveness of the Agents in the New York area, primarily by the addition of nonfull-time personnel, called Wildlife Inspectors, to augment the regular Agent force. With this increase in manpower, the New York Law Enforcement District has simply begun enforcing the laws which have been present for some time. The inspectors normally question the documentation, markings, and nature of all shipments of wildlife which they come into contact with. Many of the things which Mr. Poser complains of later in his statement relate to the enforcement of those portions of the law which are actually the tools for ferreting out wildlife violations, such as the marking requirements. When these marking requirements, and the requirements to fill out declarations upon importation, are not complied with, then the job of wildlife law enforcement is compounded tremendously. It is compliance with these seemingly minor requirements that assures first, that the shippers of wildlife are aware of the Federal wildlife laws; second, that being aware of such laws there is more of a tendency to obey them; and third, that adherence to these requirements makes it more difficult for those who would avoid the law.

*The inadequacy of seizure and storage procedures.*—We do not feel that Mr. Poser's suggestions for amendments to the Act are either practical or necessary. We are aware of the lack of adequate storage facilities, especially for perishable products, and are making efforts at the present time to remedy this problem. By the time the Congress could act on such a matter, the problem, will probably have been solved.

The things Mr. Poser complains about in relation to seizures are problems of an administrative nature, and as he indicates at the end of his statement, he has been working out many of these problems with the Special Agent in Charge of the New York District. To add a requirement to the statute that no item could be held for more than 48 hours without an "arraignment" before a Federal court or magistrate or administrative law judge would be to unnecessarily hamper our operations. Many times the backup information which would clearly establish the existence or absence of a violation takes a fair amount of time to develop. As long as the items in question are properly stored, we see no reason for requiring a court procedure which would require us to have our evidence amassed within 48 hours. It must be kept in mind that wildlife crimes are "victimless" crimes, where virtually all the evidence is circumstantial or indirect. In addition, much of the evidence in the cases of fur shipments has to be developed from overseas sources. This can be very time consuming.

In addition, many of our statutes provide for forfeiture of items seized in connection with the violation. We have found that this forfeiture is a substantial deterrent to further violation by that person or persons with whom he is associated. Monetary penalties become simply the "cost of doing busi-

ness" under many of our statutes, and do not have the same effect on violators as does seizure and forfeiture of their goods.

In conclusion, we feel that the problems of seizure and storage of merchandise can be worked out locally with the members of the fur industry. We feel that the statutes presently contain sufficient authority and policy directions to provide the overall guidance for solving these problems.

*Notice of seizure and withholding of clearance.*—Again, the problem complained of by Mr. Poser is a problem of administration. We feel that this is best worked out at the local level. Our regulations used to require that notice of seizure be given within 48 hours, but we found this to be impractical. Much of the impracticality related, and still relates, to our shortage of manpower. While this situation has been somewhat alleviated at the Port of New York, the same is not true in all areas of the country. Even at the Port of New York, we are not at full strength. To require that notice of seizure be given within 48 hours in every case, is to run the risk that cases where this proves to be impossible might be lost. We fully recognize and sympathize with the problem of all consignees or brokers of shipments which are seized or delayed for inspection. It has been and continues to be our policy that notice of seizures are a priority item and should be made within the shortest possible time.

*Establishment of standards for storage of seized skins.*—While we agree that this is a desirable objective, we feel that it is better done by policy and regulations, and not by amendment to the statute. We have no objection to working with the fur industry or any other industry, in working out an acceptable set of basic criteria for the storage of live, perishable, and non-perishable commodities or animals.

*Establishment of an industry advisory committee.*—This comment bears similarity to the previous comment on standards for storage of seized skins. While we have no objection to the idea of advice on proper standards of storage, we feel that Mr. Poser's suggestion is rather narrow and self-serving. As indicated in the previous paragraph, we feel that any change in the regulations to set such standards should be done for all the wildlife which we may have occasion to seize and store, both live and dead.

We feel that the problem is better handled by drafting a set of proposed regulations and allowing all interested parties to comment on them. In that process, we would welcome consultations with various interested groups, such as the Humane Society, various zoos, fur industry, and other affected industries and interests. We do not see any need to attack this small problem with an advisory committee with a broad mandate.

We always welcome suggestions from the fur industry or any other industry. It must be understood however, that we do not believe all changes requested of us are appropriate. In our view, many of the changes which are being requested by various members of the fur industry, would simply alleviate them from meeting requirements of the law. Although we realize that it is sometimes burdensome to meet the requirements of statute, we feel that these requirements are well-conceived and see no good reason for alleviating any part of their observance.

*Unreasonable package marking requirements.*—We would first observe that this question of the marking of packages has nothing whatsoever to do with the Endangered Species Act of 1973. The provision has been a part of the Lacey Act for many years.

As pointed out by Mr. Poser, it was amended to allow furriers or any other shipper of wildlife products to use a symbol in place of a marking which would potentially identify valuable products to thieves. The requirement that an applicant for the use of such a symbol show actual losses is, to us, fairly clear on the face of the statute. There is no finding in the statute that simply marking a package with the name and address of the consignor and consignee and the number and kind of its products will automatically lead to thievery, even if the contents of the shipment are valuable. All that Congress did at the time that the marking requirement was amended, was to recognize that it was possible that such marking would lead to thievery of the packages.

Our regulations on the matter state that the Director may issue the permit allowing the use of a symbol in place of marking if the applicant demonstrates that the marking as required by the statute would create a "significant possibility of the theft of the package or its contents." Our regulations

also require the description of evidence showing actual thefts "if any" incurred by the applicant which could be ascribed to the marking requirements of the statute. These two things taken together make it clear that we do not have an absolute requirement that every applicant have a history of thefts before he can qualify for a symbol marking permit. He simply has to be able to demonstrate a likelihood of loss if he is required to follow the exact provisions of the statute. We do not feel that the issuance criteria for symbol marking permits has been overly strict, or has been administered in a way to harm Mr. Poser's interests.

In addition, Mr. Poser complains about the use of the symbol prefix or suffix of "FWS" or "WS" or some other letters. We have offered several times to Mr. Poser and other representatives of the fur industry that if they could come up with a more workable system for the proper identification of wildlife shipments, that we would be willing to discuss the matter. However, in our view, there has to be some adequate marking on the outside of the package, not simply on the documentation. Also, the marking has to be sufficient to allow enforcement officers of both the Customs Service and the Fish and Wildlife Service to recognize the use of a symbol.

In conclusion, we feel that Mr. Poser's problem in regard to the marking of products is minimal at best. We see no reason for changes in either the Endangered Species Act or the marking requirements itself to address this problem.

We would also note that we very often come across illegal shipments of furs, particularly endangered species furs, interleaved among shipments of legal furs. We also find shipments of furs in crates marked "household goods" or "leathers". It is these practices, which we run across on a regular basis, that lead us to insist on compliance with the marking provisions as they are presently constituted. This is not to imply that Mr. Poser or any of his associates are involved in these practices. It is simply to indicate that the practices do go on, and that there is a need for the statutory requirements.

*Bonding procedures to release seized shipments.*—Mr. Poser's statement on the bonding provisions of our regulations overlooks one very important provision. The regulations state that the use of the bonds shall only be allowed where it is determined either that the health or safety of the wildlife so requires, or that the release of the seized wildlife or other property would not frustrate the purpose of the statute.

It is our general policy only to use the bonding procedures in the case of live wildlife. It often happens that a violation involves the shipment of live wildlife, but there are no adequate facilities, except those of the consignee himself, for the care of the animal. In that case, it has been our consistent policy to put the welfare of a particular animal above all other considerations.

In the case of products of animals, however, we do not have any such feeling. Assuming that Mr. Poser's problems of the proper storage of the items is reconciled, then we would not intend to actively extend the bonding provision to the seizure of wildlife products. As we indicated above, the seizure and holding of such products is very often necessary as an essential element of the evidence in a case. We have also observed that the forfeiture of seized products is a very good deterrent. However, we are presently working on draft regulations to deal with the whole area of seizure, bonding and forfeiture. We would welcome any constructive suggestions as to how these procedures might be better written. We will take into account the statements in Mr. Poser's testimony. Again, we feel that the arena in which to work out the problems in this area is the regulations, and not by amendment to the statute.

*The look-alike species and the lack of trained enforcement personnel.*—First of all, we disagree strongly with Mr. Poser's observation that the "look-alike" authority is unnecessary. In the context of the overall enforcement of the Endangered Species Act, we believe that this authority is essential. We have had many instances of shipments of wildlife parts or products which could not positively be identified, even by the foremost experts in the country, as to the species or its origin in the wild. We have lost cases on this basis, or have not been able to obtain forfeiture of significant portions of shipments on this basis.

Second, Mr. Poser is concerned for no reason. Except for the American alligator, no "look-alikes have" have been established by regulation at this point in time. When such "look-alikes" are established, this will be done

through the normal rulemaking process of the Endangered Species Act, and the fur industry will have an adequate opportunity to comment on each particular listing of "look-alike."

We are now moving, within the constraints of manpower and budget limitations, to provide the kind of training and identification that Mr. Poser complains that our Agents and Inspectors do not have. In any case, we cannot agree with the overly broad damnation of the operations of our New York District. Mr. Poser's statements are vague, and therefore are unfair. Without a specific citation to a particular instance, it is impossible for us to refute his allegations.

Mr. Poser also criticizes the advertising campaign which the Fish and Wildlife Service has recently undertaken. We believe that his comments are completely erroneous. In fact, they are inconsistent with his plea, earlier in his testimony, that the Fish and Wildlife Service not enforce the law so strictly until it has done its job of educating his industry of the existence of these laws. That is the very purpose of the Fish and Wildlife Service public educational campaign. The traveling public has not, in fact, had the benefit of years of contact and experience with the Federal wildlife laws that Mr. Poser and his industry have had. Therefore, it is one of the most necessary parts of the enforcement program to educate as much of the public as possible to the existence of the Federal laws protecting endangered species.

We disagree with Mr. Poser's allegation that the advertisements and the displays are unfairly oriented against the fur industry. The advertisements and displays are factual, and were not produced with any malice toward any particular industry or group. They were produced with the idea in mind of educating the public as to the facts about endangered wildlife. It is simply a fact that much endangered wildlife finds its way into fur products. We believe that this is as unfortunate as Mr. Poser believes it is.

As to his idea that every traveler should be given a pamphlet, we are attempting, within the realm of possibility, to do this. Mr. Poser should note that every one of the television ads contains an address to which the viewer can write for more information. This information is in the form of a pamphlet, which does tell the traveler much more specifically, what he may and may not bring back. If Mr. Poser could find a way to guarantee that such a pamphlet would find its way into the hands of every traveler upon his departure from the United States, we would be delighted to learn of such a system.

*Inability to sell, ship, etc., inventories of furs skins lawfully purchased.*—We believe that Mr. Poser's statement here has no basis. His complaint is primarily in relation to animals listed subsequent to the 1973 Endangered Species Act and he overlooks the "threatened" category of wildlife.

It is probable that many future listings of wildlife will be in the threatened category. This means that there is a great deal of flexibility in writing regulations to protect threatened species. First, when such regulations are proposed, Mr. Poser would have adequate opportunity to comment on any proposed regulation, and to request special treatment of inventories of such items which are being lawfully held at that time. Second, since every listing, whether it is endangered or threatened, must go through the rulemaking procedure specified in the Act, there is both adequate opportunity to comment on the validity of listing and the affect on legitimate commercial interest, and there is also time for commercial holders of such wildlife to rid themselves of their inventories. We believe that these factors, which are already built into the statute, are more than adequate to handle the problems Mr. Poser has raised.

*Right to obtain interpretative rulings from the administrator.*—While we sympathize with the position of any person who is regulated by the Federal government, we cannot agree with Mr. Poser's observations or suggestions. We do not think that it is either necessary or practical to establish a system for giving interpretative rulings. Mr. Poser and his industry are in no different position than any other regulated industry which is required to seek legal advice as to whether a given course of action is within the law or not. It would take a rather large increase in the present manpower of the Fish and Wildlife Service to provide such free legal service to the fur industry, or any other affected interest.

In regard to Mr. Poser's comments on the enforcement of the foreign law portion of the Lacey Act, it would be highly impractical and costly at this time for the Service to publish summaries of the foreign laws. One reason for this is that foreign law is constantly changing and any publication would soon be out of date. In addition, when the Convention On International Trade

In Endangered Species of Wild Fauna and Flora is fully implemented it should take care of most of Mr. Poser's concerns. In the interim, we would welcome other suggestions and recommendations of the fur industry or any other interested group.

#### CONCLUSION

In general, we feel that Mr. Poser's statement is highly self-serving. We are fully aware of the problems of seizure, storage, training of new personnel, and the other administrative problems which he refers to. We are making every effort, within our limitations, of resolving these problem areas. As he indicated in his statement, our field personnel are not adverse to including industry recommendations or suggestions in their thinking.

Mr. Poser would give the impression that the Fish and Wildlife Service is intentionally harassing the fur industry. This is simply not true. It is true that we have stepped-up our enforcement efforts in the New York area, and that throughout the country we are paying more attention to the commercialization of wildlife. This, we believe, is in keeping with the intent of Congress in the Endangered Species Act. As our manpower and budget limitations allow, we intend to continue such stepped-up enforcement. There is bound to be a period of discomfort among the many interests affected as we being enforcing the law more vigorously. We do not intend to be unfair nor to use our authority to harass any particular group. We simply intend to see that the requirements of the law are obeyed. If we can assure this to any reasonable extent, we feel that there will be definite benefits to endangered and threatened species. As we have indicated above, we are not simply finding "technical" violations of the law, but we are continuing to find substantive violations, many of which are masked by lack of adherence to the "technical" requirements.

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#### FISH AND WILDLIFE SERVICE RESPONSE TO QUESTIONS

This is in response to questions submitted to us at the first day of oversight hearings, October 1, 1975. The questions deal with allowable transaction by both commercial and noncommercial zoos in relation to endangered species. We think it would be appropriate to first cover the matter with a general explanation of the legal requirements and our policy in the area of transfers between zoos.

The proper point to begin such a discussion is with the prohibitions themselves. Section 9(a)(1)(E) of the Endangered Species Act makes it illegal to deliver, receive, carry, transport, or ship in interstate or foreign commerce, any endangered species "in the course of a commercial activity." Subparagraph (F) of the same subsection makes it illegal to sell or offer for sale in interstate or foreign commerce any endangered species. Thus, the Act prohibits any activity in interstate or foreign commerce which is a "commercial activity." The qualifying phrase dealing with commercial activities is not added to the prohibition on sale or offer for sale because the sale is in itself a commercial activity.

In the area of foreign trade, the Act prohibits any importation or any exportation. This prohibition applies whether or not a "commercial activity" was involved. Therefore, when foreign commerce is involved, all transactions are prohibited.

It must be remembered that any prohibited activity can be carried on if a permit has been issued. Permits are available under section 10 of the Act for scientific research, or for propagation or an other activity which will enhance the survival of the species. Therefore, it is never proper to say that, in the final analysis, an activity is totally prohibited by the Act. However, where endangered species are involved, permits are not available for exhibition for zoological purposes. This type of permit had been available under the 1969 Endangered Species Conservation Act, but is not available under the present Act. It should be noted, however, that when a species is listed as threatened, such a permit is available.

The distinction between the activities of a commercial zoo and noncommercial zoo arises primarily because the prohibition on delivery, receipt, carriage, transportation, etc., in interstate commerce only applies when a commercial activity is involved. Therefore, whenever a transfer between any two parties is made that does not involve a commercial activity, such transfer is not

prohibited by the Act. This of course does not apply to a sale or an offer for sale, which by its nature is a commercial activity. (In any case, whether or not you consider a sale a commercial activity by its very nature, it is specifically prohibited by the Act, without the qualifying clause which requires that it be done "in the course of a commercial activity.")

The questions you asked also related to the exemptions provided in the Act by the pre-Act wildlife. That exemption applies only if the wildlife was held at the time the Act went into effect, and if it was not being held in the course of a commercial activity. The legislative history of the Act, specifically page 27 of the Conference Report on the Act (House Report No. 93-740, 93rd Congress, 1st Session; December 19, 1973) says in part, "only persons holding such goods and animals for other than commercial purposes would be able to plead this subsection as a defense, such as noncommercial zoos . . ." We have taken that language as a clear indication that Congress intended to make distinctions between the activities of commercial zoos and noncommercial zoos in relation to the application of the pre-Act exemption. Based on that understanding of the pre-Act exemption, our policy until recently has been that endangered species held for exhibition by a public zoo (municipal, county, state or Federal zoo, or nonprofit institution) on December 28, 1973, were considered to be excluded from the prohibitions unless on that date the animal was the subject of an agreement to sell, barter or trade. However, endangered species held on December 28, 1973, by commercial zoos (those operated for profit) were subject to all the prohibitions. In our recent regulations, however, which can be found in 40 FR 4412, September 26, 1975, we defined the phrase "industry and trade", which occurs in the definition of commercial activity in the Act, to mean the actual or intended transfer of wildlife from one person to another in the pursuit of gain or profit. This definition means that a commercial activity does not include the holding of an animal for exhibition or even moving an animal in interstate commerce for the purpose of exhibition. This interpretation opens the pre-Act exemption to all those animals being held by commercial zoos at the time the Act went into effect.

A further policy that we hold in regard to the pre-Act exemption is that when the exempt status of an animal is shown, the animal itself carries the exemption for its lifetime and may be traded freely. This means that the ability to sell in interstate commerce, for instance, is not limited to the party that in fact held the animal on December 28, 1973, but extends to any subsequent purchaser of that animal.

The policies referred to in the above two paragraphs can be found in a fact sheet entitled "Endangered Species Act of 1973 - Prohibitions and Permits" which has been distributed by our Law Enforcement Division since October of 1974. A copy of that fact sheet and all other relevant fact sheets have been attached to this memorandum for your information. We are now in the process of developing a new fact sheet to reflect the regulations recently published and referred to above.

In regard to the question of breeding loans, we have also evolved a policy on that matter. By its very nature, a breeding loan can be seen as a barter transaction. The typical breeding loan involves the transfer of a breeding animal to mate with another animal, and the return of a proportion of the progeny, as well as the return of the original breeding animal, to the lender. This activity apparently falls within the definition of "industry and trade" referred to above. However, considering the importance of this type of activity to the zoological community, we have established a policy based on the distinction between commercial and noncommercial zoos. This policy states that the type of breeding loan described above, where there is no exchange of money, and which occurs between nonprofit institutions (as defined by the institution's IRS tax exempt status or by its status as a unit of the Federal, state or local government) are not "commercial activities." Therefore, breeding loans in interstate commerce between such nonprofit institutions are not considered to be prohibited by the Act.

With this as background we will return to the specific questions you asked and answer them one at a time. All of these answers assume three things. First, it is assumed that every animal involved was taken lawfully. If this was not the case, then any possession, transportation, receipt, etc., of such animal would be a violation of the Act. Second, these answers also assume that no permits have been obtained for the required activity. Third, these answers also assume that the activity is taking place in interstate, not in

foreign, commerce. (You will recall that we stated that the prohibitions on foreign commerce, that is, import and export, do not require the involvement of a "commercial activity." Therefore, the distinctions based on commercial versus nonprofit institutions do not hold in this area.)

*Question No. 1.* Can a nonprofit zoo give away an endangered species to another zoo?

Answer. Transactions in interstate commerce are prohibited only if they are undertaken in the course of a commercial activity. Therefore, if a transfer from one zoo to another has no connection with a commercial activity then it is not prohibited. This answer holds for the other aspects of Question No. 1.

*Question No. 2.* What can a noncommercial zoo do with a pre-Act animal?

Answer. As stated above, once the pre-Act status of an animal has been proven, then the exemption follows that animal for a lifetime, regardless of the nature or status of its owner.

*Question No. 3.* Can a commercial zoo give away an endangered animal to a nonprofit zoo or to a commercial zoo?

Answer. This question is very similar to question no. 1. Provided that in fact no commercial activity is involved, and that the transfer is a complete donation, the Act does not prohibit any such action in interstate commerce.

*Question No. 4.* Can a nonprofit zoo sell an endangered animal to (a) another nonprofit zoo? (b) to a commercial zoo?

Answer. The Act specifically prohibits sales, or offers for sale, in interstate commerce. Therefore, if the sale takes place in interstate commerce it is prohibited. There is no distinction in the interpretation of this prohibition between a commercial zoo or a nonprofit zoo.

*Question No. 5.* Can a commercial zoo, with the understanding that it will be returned, make a breeding loan to (a) a nonprofit zoo? (b) to a commercial zoo?

Answer. This question has been fully answered in the paragraph above dealing with the breeding loan situation.

*Question No. 6.* Can a nonprofit zoo make a similar breeding loan to (a) a nonprofit zoo? (b) to a commercial zoo?

Answer. This question has also been fully answered by the paragraph on breeding loans above.

*Question No. 7.* Do you think all these distinctions serve any useful purpose?

Answer. In developing the policies and regulations regarding the distinctions between commercial zoos and nonprofit zoos, we have followed the declared language of the statute and the intent of Congress, as described above in this memorandum. If you assume that Congress clearly intended and desired all the distinctions which are in the statute, then we believe that the distinctions described in this memorandum do serve a useful purpose.

However, with that in mind, our experience has indicated that there is very little practical distinction between the activities of commercial zoos and noncommercial zoos. They are both involved in the same basic business, even though some charge admission and some do not. In fact, there are a number of public zoos that charge admission. Therefore, this distinction does not really serve to clearly delineate the commercial from the noncommercial zoos. The activities of trading in wildlife are common to both types of zoos. The abuses of wildlife which are possible by a commercial zoo are just as possible by a noncommercial zoo. It could be that the incentive to commercial profit would lead a commercial zoo to attempt illegal activities that a noncommercial zoo would not do. In addition, the fact that most noncommercial zoos are arms of a local or state government, or of the Federal government, would imply that such institutions would be more likely to be law abiding than their commercial brothers.

Another possible distinction would be between the "bona fide" zoo, whether it be commercial or noncommercial, and other zoos. This distinction is extremely difficult to define, although examples of the "bona fide" and other institutions (which are commonly referred to as "roadside zoos") can easily be found. In the context of other regulations issued or proposed by the Fish and Wildlife Service, (specifically, the proposed revisions to the "injurious wildlife" regulations) we have wrestled with the problem of distinguishing these two types of zoos. We have been at a loss to find a definition adequate to distinguish between them.

In conclusion, the Act, in our view, should be aimed at limiting, or prohibiting, those activities which in fact are harmful to wild populations of

endangered species. Captive animals are controlled primarily in order to prevent further damage to wild populations of endangered species. In addition, it is argued that control of captive wildlife can in fact benefit, through increased efforts of propagation or research, the wild populations.

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C.

ENDANGERED SPECIES ACT OF 1973, PROHIBITIONS AND PERMITS

The Endangered Species Act of 1973 places new restrictions on the taking and trafficking of certain animals. At this time there are no "threatened species" designated and all statutory restrictions apply to those animals listed as "endangered species" under previous legislation. Such list may be found in the regulations at 50 CFR, Part 17. This sheet briefly outlines the exclusions, prohibitions, and permit procedures under the Endangered Species Act of 1973. More specific information may be obtained from the statute itself.

EXCLUSIONS

Endangered species (live or products, such as coats, rugs, hunting trophies, curios) which were held in captivity or in possession on December 28, 1973, and not held in the course of a commercial activity, are exempt from the Act and may be freely traded throughout the lifetime of the animal or product. Commercial activities include trades and barter, as well as direct sales.

Endangered species held by a public zoo (municipal, county, State or Federal zoo, or nonprofit institution) on December 28, 1973, will be considered to be excluded from the prohibitions, unless, on that date, the animal was the subject of an agreement to sell, barter or trade. However, endangered species held on December 28, 1973, by commercial zoos (those operated for profit) are all subject to the prohibitions.

All progeny of endangered species held on December 28, 1973, are covered by the Endangered Species Act and the prohibitions apply. Progeny for this purpose includes animals born after December 28, 1973.

When the endangered species (live or products) which are exempt from the prohibitions of the Endangered Species Act by virtue of the above exclusion are transferred or shipped interstate, documentary evidence supporting this exclusion should be included in the shipment or made readily available.

PROHIBITIONS

The Endangered Species Act of 1973 prohibits, among other things, the following activities with regard to endangered species covered by the Act: (1) Importation; (2) exportation; (3) taking (under certain circumstances) and—if an animal is illegally taken—possessing, selling, delivering, carrying, transporting or shipping; and (4) commercial activities in interstate or foreign commerce, including delivering, receiving, carrying, transporting, shipping, or offering for sale.

ACTIVITIES NOT PROHIBITED

Interim policies have been adopted to clarify the above prohibitions. These are reflected below:

(1) In relation to (4) above (delivery, receipt, carriage, transportation or shipment of endangered species), the prohibition applies only if interstate or foreign commerce is involved *and* it is in the course of a commercial activity. Although it is extremely difficult to resolve, except on a case by case basis, what constitutes "interstate commerce" or a "commercial activity," there are several situations which are clearly *not* interstate commerce or commercial activity, and therefore are not prohibited. These are:

(a) Shipment of endangered species in interstate commerce where the purpose of such shipment is to place the animal on loan to another individual or institution. If the receiver later obtains a permit under the Act, the animal may be legally purchased by the receiver at the time he receives the permit.



(b) Shipment of an endangered animal in interstate commerce where the purpose of such shipment is to make a bona fide gift to another individual or agency without any assurance of any gain or profit by barter, credit, or any other form of compensation whatsoever. This is permissible even if at some future time in a totally unrelated transaction, the original receiver ships a different animal to the original donor as a gift, and again there has been no assurance of any gain or profit by barter, credit, or other form of compensation. This must be, however, two separate transactions, neither of which took place in the course of a commercial activity.

(c) Shipment, sale, transfer or transportation of an endangered species where all aspects of the transaction take place entirely within one State.

(2) The Act prohibits the sale, or offering for sale, of endangered species in interstate or foreign commerce. However, the sale of an endangered species in interstate or foreign commerce would be legal if a permit was obtained prior to the sale. Therefore, endangered species may be advertised for sale *provided* that the ad contains a statement similar to the following: "This offer for sale of an endangered species of wildlife is contingent upon the receipt by the purchaser (or the seller, in the case of exports) of a valid permit for the transaction issued by the U.S. Fish and Wildlife Service."

#### PERMITS

For an endangered species covered by the Act a person must have a valid permit in order to engage in an activity which is prohibited. Permits may only be issued for scientific purposes or to enhance the propagation or survival of the affected species. No permits may be issued for purely public display purposes. In addition, certain transactions may qualify for a permit under the economic hardship provisions of the Act; however, this only applies to newly listed species.

Permit application should be submitted in accordance with Federal regulations contained in 50 CFR Parts 13 and 17. New regulations are being developed, but in the interim you may refer to those regulations in Part 17 designated for the previous Endangered Species Conservation Act of 1969. Until final regulations are implemented, it will provide guidance as to the nature of the information required.

Applications and correspondence regarding permits should be submitted to the Director (FWS/LE), U.S. Fish and Wildlife Service, P.O. Box 19183, Washington, D.C. 20036. Phone inquiries may be made on (202) 343-9242 or (202) 343-9237.

Permit applications must be complete in order to be processed. In addition, permit applications must be published in the Federal Register, and public comment invited for 30 days. Therefore, it takes approximately 60 days to process an application and issue a permit once a complete application has been received by the Service. In some cases, a longer time period is required.

A fee is not required for processing those permits issued under Section 10 (a) of the Endangered Species Act, for scientific or propagational purposes. However, in order to offset administrative expenses, a \$50 fee must be submitted for economic hardship permits, issued under Section 10(b).

Who should apply for a permit? Where the situation is a multi-party transaction, and all of the parties are within the jurisdiction of the United States, the certified application must come from the party who is going to utilize or purchase the animal. If a permit is issued for the transaction, the authorization within the permit will name the seller as authorized to sell and to ship in interstate commerce the animal which is the subject of the permit. This avoids unnecessary duplication of permits.

In the export situation, we only accept applications from the party within our jurisdiction, that is, the exporter. The exporter is required to provide all such information from the foreign party as is deemed necessary to make a of checking information from foreign sources, the processing of applications judgment on the issuance of the permit. Because of the possible complication for export transactions may take substantially longer than a normal permit.

Note.—Meeting the requirements outlined by this fact sheet does not alleviate the necessity for persons to observe other requirements or restrictions on wildlife under Federal, State, or local law.

DEPARTMENT OF THE INTERIOR, U.S. FISH AND WILDLIFE SERVICE  
FACT SHEET: LAWS RESTRICTING COMMERCE IN WILDLIFE

ENDANGERED SPECIES ACT OF 1973

Prohibits the importation and exportation, and the sale, trade, or shipment in interstate and foreign commerce of endangered species, their parts, and products made from them. The Act also makes it illegal to harass, harm, capture, or kill any such species within the United States. Over 400 animals are on the Secretary of the Interior's List of Endangered Species.

Exceptions: Permits may be granted for scientific or propagational purposes, or for certain economic hardship situations involving newly listed species.

Penalties: Up to a \$20,000 fine and one year imprisonment, as well as forfeiture of the endangered species and vehicles or equipment used in the violation.

Rewards: Individuals providing information leading to a finding of a civil or criminal violation can be awarded as much as \$2,500.

MARINE MAMMAL PROTECTION ACT OF 1972

Establishes a moratorium on the taking of marine mammals by U.S. citizens and bans the importation of marine mammals, their parts, and products made from such animals. Protected are polar bears, sea lions, porpoises, whales, sea otters, walruses, seals, dugongs, and manatees. Whales, manatees, dugongs, and certain species of seals are also covered under the Endangered Species Act.

Exceptions: Alaskan Aleuts, Indians, and Eskimos are permitted limited hunting for subsistence purposes. Parts of marine mammals so taken can also be used in the manufacture and sale of native handicrafts. Research, display, and economic hardship permits can also be granted.

Penalties: Up to \$20,000 and one year imprisonment. Vessels or other conveyances used in violation may be assessed civil penalties as high as \$25,000 and forced to forfeit their cargo.

*Lacey Act*.—Originally passed in 1900, amended several times.

Prohibits the interstate transportation of wildlife taken, transported, or sold in violation of state law. Prohibits the importation of wildlife taken or exported in violation of the laws of a foreign country.

Penalties: Up to \$10,000 and one year imprisonment.

*Migratory Bird Treaty Act*.—Originally passed in 1918, amended several times.

With few exceptions makes it unlawful to kill, capture, collect, possess, buy, sell, ship, import, or export any migratory bird or pest, nest or egg unless an appropriate Federal permit is first acquired. Most commercial activities involving nongame migratory birds are prohibited.

Penalties: Up to \$2,000 fine and six months imprisonment.

*Bald Eagle Protection Act*.—Enacted in 1940, amended in 1962 (to include golden eagles), and 1972.

Makes it illegal to take bald or golden eagles, or to sell, purchase, or barter their parts or products made from them under any conditions. Prohibits the killing, capture, harming, or harassing of any bald or golden eagle. Permits may be granted for scientific, exhibition, or religious purposes.

Exceptions: None for commercial activities.

Penalties: Up to \$10,000 and one year imprisonment.

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C.

AMERICAN ALLIGATOR REGULATIONS

INTRODUCTION

The new American alligator regulations have been published on September 26, 1975, in the Federal Register and are now in effect. This fact sheet provides the major points of the new regulations and initial policy for implementing and enforcing these regulations.

## ENDANGERED ALLIGATORS

All American alligators, except those found in Calcasieu, Cameron, and Vermillion Parishes of Louisiana and captive alligators, will remain listed as endangered species.

All prohibitions which apply to endangered species still apply to those alligators listed as endangered.

## THREATENED ALLIGATORS—GENERAL

All captive American alligators, and wild alligators in Calcasieu, Cameron, and Vermillion Parishes in Louisiana will be listed as threatened species under the similarity of appearance provisions of the Act. This means that these alligators will be controlled as threatened species under the Act in order to protect the endangered alligators which they resemble.

## THREATENED WILDLIFE—PROHIBITIONS

The prohibitions which apply to threatened American alligators are found in section 17.42(a) of the regulations. These prohibitions are summarized below.

**Taking.**—The taking of threatened American alligators is generally prohibited, however, the regulations provide several exceptions to this prohibition. These exceptions are:

- (1) Taking in self-defense by any person.
  - (2) Taking by designated employees of Federal or State conservation agencies for salvage of sick, injured, orphaned, dead, or nuisance specimens.
- Each taking under (1) or (2) above must be reported to the U.S. Fish and Wildlife Service, Washington, D.C., within 5 days. The carcass may not be disposed of without prior approval of the U.S. Fish and Wildlife Service.

(3) Taking by designated employees of Federal or State conservation agencies in the performance of their official duties for scientific research or conservation programs.

(4) Taking by any person in Calcasieu, Cameron, and Vermillion Parishes in accordance with the laws and regulations of the State of Louisiana. Louisiana regulations provide for the issuance of permits to alligator hunters, and the tagging of all legally taken alligator hides.

**Unlawfully taken alligators.**—The possession, sale, delivery, and transportation of unlawfully taken alligators is prohibited.

**Import or export.**—The importation and exportation of American alligators is prohibited. This applies to commercial and noncommercial shipments as well as to personal effects.

**Commercial transactions.**—Generally the sale and offer of sale, as well as the receipt, delivery, and transportation of American alligators in interstate or foreign commerce in the course of a commercial activity is prohibited. There are four exceptions to this prohibition.

(1) The hides of American alligators lawfully obtained from the State of Louisiana before December 28, 1973, may be sold or offered for sale in interstate (not foreign) commerce if the Director of the State Wildlife conservation agency certifies to the Director of the Service that all such hides were lawfully obtained and can be identified. Any such hides may only be sold, offered for sale, delivered, transported, or shipped in interstate commerce to a person holding a valid Federal buyer, tanner, or fabricator license. There is no prohibition against these hides being sold, transported, or received in interstate commerce within the State of Louisiana.

(2) American alligator hides taken by Service or State officials for scientific or research conservation purposes may be sold by the Government or the State, provided that the hides are tagged as required by the regulations and that the hides are sold only to a Federally licensed buyer.

(3) The hides of American alligators taken in Calcasieu, Cameron, and Vermillion Parishes in accordance with the laws of the State of Louisiana may be sold, or offered for sale only to Federally licensed buyers. These hides may be received, transported, or delivered only to persons holding a valid Federal license.

The meat and other parts (including heads) of alligators may not be sold or offered for sale, however, the regulations do not prohibit a person who has legally taken an alligator under the Louisiana harvest from giving the meat, head, or other parts to another person as a bona fide gift.

(4) Captive alligators are listed as threatened species under the similarity of appearance provisions of the Act. Permits may be issued to authorize the marketing or other uses of these animals.

#### FEDERAL LICENSES FOR COMMERCIAL TRANSACTIONS

Service regulations establish a system of Federal licenses which is designed to control the disposition of alligator hides from the time of taking through the retail marketing of the fabricated product. This system establishes three categories of licenses: (1) buyers, (2) tanners, and (3) fabricators, each of which is defined in the regulations. Each person wishing to engage in one or more of these activities must first obtain a license from the Service. The same person may be licensed in more than one of the above categories. Licensees may buy, tan, or fabricate only American alligator hides lawfully taken, transported, and sold in accordance with Federal regulations. Licensees must also comply with the regulations concerning the disposition of tags and shipping labels, and must maintain accurate records of all hides including records of all State tags. Fabricators must affix a mark provided by the Service to each product made from American alligator hides. Such properly marked manufactured products may be transported, shipped, delivered, carried or received in interstate commerce in the course of a commercial activity and may be sold or offered for sale in interstate commerce (but not in foreign commerce).

U.S. DEPARTMENT OF THE INTERIOR,  
FISH AND WILDLIFE SERVICE,  
Washington, D.C. October 29, 1975.

Mr. AUBREY WAGNER,  
Chairman, Tennessee Valley Authority,  
New Sprinkle Building,  
Knoxville, Tenn.

Dear Mr. WAGNER: On October 6, 1975, we determined the Snail Darter, *Percina (Imostoma)* sp. to be an Endangered Species as provided for by the Endangered Species Act of 1973 (the Act). That determination was formalized by publication of a final rulemaking in Volume 40, Number 197 of the Federal Register, dated October 9, 1975. The determination becomes effective on November 10, 1975.

Authority for enforcement of the Act, insofar as this species is concerned, is vested in the Department of the Interior. In this regard, I draw your attention to former Secretary of the Interior Morton's December 3, 1974, letter to you advising the Tennessee Valley Authority (TVA) of the enactment of this law and the ramifications thereof.

The extensive fact-finding which preceded our determination of the Endangered status of this fish substantiates, in our opinion, the contention that your agency's Tellico Dam project, if continued as presently planned, will result in destruction of the ecosystem upon which this Endangered species demands. This undoubtedly will result in the extinction of the established natural populations of this species, a result obviously contrary to the policies and purposes of the Act.

Accordingly, we urge the Tennessee Valley Authority to contact, immediately, the Fish and Wildlife Service Regional Director in Atlanta to begin consultations as required by Section 7 of the Act. The purpose of the consultation and assistance process is to explore, by bringing together the expertise of the FWS and TVA, all possible options to prevent the extinction of the Snail Darter. Ultimately, the responsibility for compliance with the Endangered Species Act of 1973, the decision on what course to follow, and what steps to take for the benefit of the Snail Darter rests with TVA. We hope, however, that the purpose of the Endangered Species Act will be fulfilled in any decision you make after completion of a cooperative and professional examination of the factors raised by the Tellico Dam project which bear upon the continued existence of that species.

The most immediate potential jeopardy, of which we are aware, to the Snail Darter's continued existence is the continuation of the transplant program initiated earlier by TVA and the land clearing operations in progress, particularly in the vicinity of Coytee Springs. Obviously, closing of the dam and filling of the reservoir in December 1976 or January 1977 constitutes the action which, in our opinion, will ultimately jeopardize the continued existence of the Snail Darter, undoubtedly destroying the existing established population of the species.

With this in mind, and in order to provide as much background information as possible to those in the FWS who will be conferring with you, would you please provide the Regional Director with the following materials and information: (1) two copies of the final EIS on the Tellico Dam project; (2) current plans and supplemental material for your Snail Darter transplant operations; (3) detailed schedules for land clearing operations including timing, locations, sizes, clearing techniques, and measures for sedimentation control; and (4) schedules and description of operations to be followed from the present time until completion of the dam and filling of the reservoir. Using this information, employees of the FWS will work with your personnel responsible for the Tellico Dam project in an effort to arrive at acceptable measures to insure that no components of the total project will jeopardize the continued existence of the Snail Darter or modify or destroy critical habitat of the species if such is found to be present by the Director in the project area.

We will advise the Regional Director to expect a letter from TVA initiating consultation and will ask him to keep us advised of progress being made.

Sincerely,

LYNN A. GREENWALT,  
*Director.*

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U.S. DEPARTMENT OF COMMERCE,  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,  
NATIONAL MARINE FISHERIES SERVICE,  
Washington, D.C., November 3, 1975.

HON. ROBERT L. LEGGETT.

*Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, Committee on Merchant Marine and Fisheries, House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: The purpose of this letter is to clarify the record with regard to a question asked at your October 6, 1975, hearings relative to the administration of the Endangered Species Act of 1973 (pp. 66 & 67 of the hearing transcript) regarding whether or not the animals listed under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (the "Convention") are also listed or proposed for listing on the U.S. Endangered Wildlife List.

With respect to those animals under the jurisdiction of the Department of Commerce, we share your concern that the Convention species not listed on the U.S. Endangered Wildlife List of the U.S. Threatened Wildlife List be examined for possible listing. We have met with representatives of the Department of the Interior and the Council on Environmental Quality to discuss program and procedural requirements under the Endangered Species Act of 1973, 16 U.S.C. 1531 et seq. However, we recognize, as does the Department of the Interior, that the review and listing process is involved and time-consuming and may not result in any additional protection for certain species. This effort is rendered more difficult inasmuch as our Department has received no specific appropriations for our endangered species program.

Pursuant to the Endangered Species Act of 1973 and the August 28, 1974, Memorandum of Understanding between the Department of Commerce and the Department of the Interior, regarding endangered species jurisdictional responsibilities, those species under the jurisdiction of the Department of Commerce which are listed on the Convention but not on the U.S. Endangered Wildlife List are:

(1) Appendix I—Atlantic sturgeon, Ganges River dolphin, Caribbean monk seal, Hawaiian monk seal, and northern elephant seal, and

(2) Appendix II—Baltic sturgeon, coelacanth, southern elephant seal, South American fur seal, Galapagos fur seal, Juan Fernandez fur seal, Guadalupe fur seal, loggerhead sea turtle, flatback sea turtle, green sea turtle, and Pacific ridley sea turtle. This agency, together with the Department of the Interior, has already proposed that the green, loggerhead, and Pacific ridley sea turtles be listed as threatened species under the Act. Nine of the remaining 13 species are marine mammals, and therefore receive protection afforded by the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) which prohibits, with certain limited exceptions, the taking and importation of these animals. In addition, all of these species have received protection since the Convention entered into force on July 1, 1975, by virtue of Section 9(c) of the Act which makes it a violation of Federal law for "any person subject to the jurisdiction

of the United States to engage in any trade in any specimens contrary to the provisions of the Convention, or to possess any specimens traded contrary to the provisions of the Convention . . . ."

Until such time as status reviews have been completed which support a determination to list as endangered species or threatened species or not to list at all, the National Marine Fisheries Service is proceeding in the following manner:

With respect to the aforementioned species on Appendix I and Appendix II which are marine mammals: No permits will be issued pursuant to the Marine Mammal Protection Act of 1972 unless the requirements of the Convention appropriate to the status of the species have been met. In addition, no permits will be issued pursuant to the Marine Mammal Protection Act of 1972 for public display of Appendix I animals.

It should be noted that while the United States delegation to the Convention evaluated the status of many species for proposed inclusion on the Appendices, it did not do so for all species proposed by other nations. For some species, the United States delegation simply did not object to the proposed listing.

We appreciate your concern for the conservation for these species, and hope that the above information is helpful.

Sincerely,

JAMES GEHRINGER,  
(for Robert W. Schoning Director.)

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#### STATEMENT OF THE NATIONAL FOREST PRODUCTS ASSOCIATION

I am James F. O'Donnell, forester for the American Plywood Association, Tacoma, Washington. I am also the chairman of the Forest Wildlife Task Group of the National Forest Products Association, headquartered here in Washington, D.C. NFPA is a federation of 26 regional and wood products associations and companies representing the growers, manufacturers, and wholesalers of solid wood products throughout the United States.

Early in 1974, NFPA established the Forest Wildlife Task Group I referred to. This Task Group has several functions. It serves in a technical advisory capacity to help the forest industry get background information necessary to accommodate wildlife considerations in timber management operations. The Task Group also acts to surface issues and make recommendations to the forest products industry with regard to endangered species, as well as the entire spectrum of timber-wildlife relationships. Active members of the Task Group include foresters, wildlife biologists, and other individuals within the forest industry interested in wildlife management as it relates to forest management.

Last fall, the Forest Wildlife Task Group developed and the forest industry adopted, a wildlife policy for the forest products industry. A copy of this wildlife policy is appended to my testimony. The forest industry recognizes that the enjoyment of wildlife is important to many people in this country. It recognizes equally that scientific management of wildlife habitat is essential to increasing wildlife numbers and diversity.

Throughout my own career, I have been very interested in wildlife. My own field experience, as well as scientific research studies, have indicated the high degree of compatibility between sound and proper forest management and the maintenance and enhancement of wildlife habitats and populations. The well planned manipulation of vegetation through timber management practices provides a greater species diversity and greater numbers of animals and plants than occur naturally. Timber management practices can also be effectively used as a tool in the recovery programs for certain endangered species. The Kirkland's Warbler is an outstanding example.

#### THE ENDANGERED SPECIES ACT OF 1973

In December 1973, due in large part to the efforts of this Subcommittee, Congress passed the Endangered Species Act of 1973. The concept behind this very important Act—a firm recognition of the necessity for providing for the protection of animal and plant species threatened with extinction, or likely to become so threatened—has broad support and acceptance among the general public. It also has widespread support within the forest industry.

Despite its generally constructive and contributive nature, there are several provisions of the Endangered Species Act which trouble us. These are related to (1) the ability of the Fish and Wildlife Service to implement effectively the intent of the Act and (2) to the large potential for abuse of this intent. We are concerned that some groups may use the Act to further their particular objectives aimed at altering or halting resource use and development. These objectives may be altogether unrelated to any legitimate desire these groups have to protect endangered species. I propose to present a more detailed discussion of such problems:

### *1. Ability to implement the act effectively*

The ability of the Fish and Wildlife Service to implement the Endangered Species Act effectively would be enhanced by a recognition in the Act that, in light of agency funding constraints, administration priorities must be set as to which species or ecosystems will be given emphasis in listing and recovery programs. The failure of the Act to recognize that certain species should have priority over others is further exacerbated by the provisions of Section 4(c)(2) which require the Service to drop everything and review at once any species which any individual requests to be removed or added to the list of threatened and endangered species. This provision has already proven to impose burdens of time, expense and disruption upon established and recognized Agency priorities.

As of October 1, 1975, the Fish and Wildlife Service had received 19 petitions to list almost 24,000 species of plants and animals. In addition, the Service has initiated action on an additional 144 species felt to be in high priority for action. It has been estimated that there may be as many as 200,000 species worldwide which could qualify for threatened or endangered status under the Act. It is obvious then that, given its limited budget, the Fish and Wildlife Service must be free to set priorities based upon scientific evidence and an assessment of the most effective use of its limited funds and manpower. The Endangered Species Act does not recognize, much less address, this problem. In fact, as explained previously, Section 4(c)(2) severely limits the flexibility of the Service to determine priorities by forcing it to make a detailed review of any species requested, regardless of the established priorities of the Agency.

There are many factors which must be considered in any prioritization of programs: What relative emphasis should be given to listing species as opposed to recovery efforts for those species presently on the list? How much emphasis should be placed upon law enforcement or research? It is apparent that several special interest groups are measuring the performance of the Fish and Wildlife Service primarily upon how many species are listed rather than by what measures are being taken to assure recovery of those species presently listed. It is hoped that the Service will resist these pressures. Daniel A. Poole, President of the Wildlife Management Institute, summed it up well in his testimony before the Subcommittee on October 2, 1975 when he said, "Adding a species' or population's name to a list will not save it. Its salvation is in the maintenance and improvement of habitat. Thus, success ultimately will be gauged by how many species are removed from the lists, rather than added. Yet, the Federal government has not come up with the people and money to contend with its vast new responsibility."

### *2. Potential for abuse of the act*

One aspect of the Endangered Species Act which deeply troubles the forest industries is the large potential for abuse of the Act by individuals or groups who may use it to further their real objectives of halting resource development projects and programs to which they are opposed. There is evidence that this may already be occurring. In August 1974, a group of individuals opposed to the La Farge Corps of Engineers dam project on the Kickapoo River in Wisconsin petitioned the Secretary to list 19 plant species which the group hoped were threatened or endangered within the flood pool of the dam. The Service was forced by law to review the status of this list and subsequently found enough evidence to warrant further review of four of those species. This review is presently going on. It appears that one, or perhaps two, of the plants may actually be proposed for listing. Suffice it to say that in this case, the petitioners were likely less concerned over the potential threat to those plant species than they were interested in stopping the project by any means at their disposal. Using the Act for such objectives

and purposes will only serve to weaken its support among Members of Congress and the general public and will be detrimental to the overall objective of protecting endangered species.

The mechanism by which projects and programs can be halted is contained in Section 7 of the Act where it states: "Federal departments and agencies shall . . . insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary . . . to be critical." The inevitable result of this section will be the modification or elimination of some Federal programs or projects in areas identified as being critical habitat for endangered or threatened species. The concern here is that there is no provision for weighing alternative values or providing for consideration of trade-offs. If a proposed Federal project might be expected to modify what is considered to be the critical habitat of an endangered species, then under Section 7, that project must be halted.

There is no question that the protection of the habitats of endangered and threatened species must be given a very high priority. These needs have been given too little consideration in the past. But under Section 7, the needs of endangered and threatened species are held to be absolutely greater than all the other needs of man. There is no provision for weighing the needs of man against the needs of a particular endangered species.

A very good legal analysis of the Endangered Species Act of 1973 which raises some of these issues appeared in the Fall, 1974, issue of Environmental Law. I would like to request that this paper by Rudy R. Lachenmeier entitled, "The Endangered Species Act of 1973: Preservation or Pandemonium?" (Environmental Law, the Lewis and Clark Law School—Northwestern School of Law, Volume 5, No. 1, Fall 1974) be included in the record.

#### IMPLEMENTATION OF THE ENDANGERED SPECIES ACT

It would seem pertinent at this time to discuss various principles, procedures and considerations which should be incorporated into the supporting data when a species is proposed for listing as endangered or threatened or proposed for removal from one of those lists. These involve a number of issues such as the approach used in listing species, including designation of "critical habitat;" the application of the National Environmental Policy Act (NEPA), and Executive Order 11821 (requiring an inflation impact statement) to the listing process; policies used for acquisition of private land within identified critical habitat areas; and the international ramifications of listing of a particular species. The issues are discussed as follows:

##### 1. *Approach used in listing or delisting a species including designation of critical habitat*

There is a need for developing and following well defined procedures for listing, delisting, and reclassifying species, as well as prioritizing species for action with regards to classification and recovery. The Fish and Wildlife Service has made a good start at developing these procedures within the constraints of limited funds and manpower and the diverse pressures under which they have been forced to operate. The complex problems facing the Service in implementing this program are tremendous. The establishment of defined procedures is a prerequisite for a sound and orderly development of the Act.

There is also a need to begin to develop criteria to be used as a basis for determining which species are really threatened and endangered. This criteria will vary between plants, mammals, birds and other taxonomic groups. Criteria based upon population numbers alone is inadequate since the numbers needed to sustain a viable population will vary between species and groups and the actual or potential external factors acting upon the population.

It appears that there are at least two approaches which could be used with regard to endangered species listing, delisting or reclassification. These are described as follows:

(1) The amount of data and support needed for a proposed rulemaking would be essentially identical to that which would be required for a final rulemaking and should include designation of "critical habitat." Under this approach, proposed listings are made only when the data exists reasonably to insure that a final rulemaking designating the species endangered or threatened, or delisting it, would occur.



(2) A proposed rulemaking would be made for species on the assumption that such a proposal will elicit enough information to determine whether a final rulemaking should be made. Under this approach, a large number of species might be proposed for threatened or endangered status under the assumption that to do so would cause people to supply enough data and information to enable final rulemaking. Under this approach, final rulemaking initially would be made for those species on which there is no conflicting data and about which there is no real controversy as to its status. It would assume that if a species is proposed for threatened or endangered status, for removal from this status, or for reclassification and no conflicting data was presented, then enough information must exist to proceed with final rulemaking.

The first approach obviously is the one which is most professionally supportable; and, without question, is in the best long-term interest of endangered species. If the Fish and Wildlife Service begins to propose listing species without hard scientific evidence that these species qualify, public and Congressional support of the Endangered Species Act will diminish. This is particularly true when listing a species or designation of the critical habitat will involve significant economic or social sacrifices.

In addition, it should be standard operating procedure that before a species is proposed for listing, delisting or reclassification or before there is a proposal for delineation of critical habitat, the information and data be given thorough review by knowledgeable scientists in the field. This review should be by individuals other than those who were responsible for supplying the original data. Significant actions should not be made based upon the subjective judgment of one or two specialists.

The current policy of the Fish and Wildlife Service apparently is encompassed by the first approach. This is commendable. Nothing would be more detrimental to the credibility of the Service or adverse to the long-term interests of the endangered species program than to begin to propose species for the list without hard evidence that they qualify. However, it is apparent that several special interest groups are actively lobbying for this approach. These pressures should be resisted.

## 2. *Application of NEPA*

It would seem that at least some proposals for listing or delisting a species or proposals for delineating "critical habitat" under Section 7 would be considered "major Federal actions significantly affecting the equality of the human environment"; and, thus, would require the preparation of an Environmental Impact Statement under Section 202(c) of the National Environmental Policy Act (NEPA). It is not expected that all such proposals would require the preparation of a NEPA statement. Many proposals may involve species which inhabit very small ranges. Thus, the designation of that species as threatened or endangered or the determination of its critical habitat would involve only a small area of land; and, thus, would not be considered a "major Federal action." Many candidate plant and insect species apparently have the characteristic of very small ranges.

However, there are many proposals which will, in fact, be "major Federal actions" in every sense of the word, and, hence, will require the preparation of an Environmental Impact Statement as required by NEPA. This statement must, among other things, address the social and economic implications of the proposed action.

There is apparently some feeling that the preparation of a single Environmental Impact Statement on the entire endangered species program will fulfill the requirements of NEPA for all but a few cases. It is highly unlikely that a single EIS can be made comprehensive enough to address adequately the questions which must be answered under Section 202(c) of NEPA. In fact, the courts have been very reluctant to uphold the legality of programmatic statements, except for programs of very limited scope and complexity. It is unlikely that any Fish and Wildlife Service program is broader in scope, more complex in its application, or has more potential for economic and environmental impact than the endangered species program.

The requirements for data and analysis needed in the preparation of a NEPA statement should be as comprehensive when a species is proposed for addition to the list as it is when a species is proposed for delisting. It would be a double standard, and indefensible, if a more detailed and comprehensive analysis is required for removing a species from the lists than for adding.

The requirement to adequately assess the environmental, social, and economic consequences of proposed Federal actions under NEPA is a strong argument indicating the need to delineate "critical habitat" at the same time a species is proposed for listing as threatened or endangered. It is difficult for the public or other Federal agencies to assess adequately the implications of a proposed listing without knowing the specific impacts such a listing will have with regard to particular areas of land. In line with this thinking, it is important that, where possible, the entire critical habitat under Section 7 be delineated at one time rather than piecemeal. If only portions of critical habitat are delineated, it will be very difficult for the public or other agencies to comment comprehensively on the implications of the entire proposal.

Any proposal to designate critical habitat under Section 7 should also include a detailed description of the specific kinds of actions which will be permitted and those that will be prohibited within the area delineated as critical habitat. This information is absolutely essential if the public is to comment comprehensively on the proposal.

The argument may be raised that the preparation of a NEPA statement for proposals designating critical habitat under Section 7 are not necessary since once it has been determined that a particular area is critical habitat for an endangered or threatened species, and that parts or all of this habitat are necessary for the survival of that species, then the Endangered Species Act allows the Secretary no discretion but to halt all Federal actions which may modify that particular area of critical habitat. Proponents of this position state that since Section 7 prohibits Federal agencies from doing anything which would modify critical habitat of an endangered or threatened species, the discussion of alternatives under Section 202(c) of NEPA becomes moot since all alternative actions would be prohibited by law.

This argument is not valid. The courts have repeatedly interpreted NEPA to be a "full disclosure" law. The courts have held that alternatives to a proposed Federal action must be discussed even if they are beyond the authority or jurisdiction of the agency in question. (*NRDC v. Morton*, (D.C. Cir. 1972), 3 E.R. 1558, 2 E.L.R. 20029). The NEPA statement has been held to be required not only for an explanation of an agency's thinking but also for the guidance of the President and the Congress. It must, therefore, consider reasonable alternatives, even if the implementation of these alternatives would be beyond the authority and jurisdiction of the agency involved or contrary to past decisions made by the President or the Congress.

The discussion of alternatives in the Environmental Impact Statement or environmental analysis statement (explaining why a NEPA statement is not required) should include discussion of the implications of not designating either some or all of the critical habitat and the projected effect of these actions not only on the species but social and economic aspects.

### 3. Requirement for an inflation impact statement

On November 27, 1974, President Ford issued Executive Order 11821 which requires that all major legislative proposals, regulations, and rules emanating from the Executive Branch include a statement certifying that the inflationary impact of such actions has been carefully considered. The order further directed the Office of Management and Budget to "develop criteria" for the identification of major legislative proposals, regulations and rules. This was subsequently done (Circular No. A-107, dated January 28, 1975). Agencies were directed to develop procedures for the evaluation of proposals by the application of the criteria described in the circular. The following considerations must be documented for actions qualifying as described above: (1) cost impact on consumers, businesses, markets, or Federal, State, or local government; (2) effect on productivity of wage earners, businesses, or government at any level; (3) effect on competition; (4) effect on supplies of important materials, products or services; (5) effect on employment; and (6) effect on energy supply or demand.

Proposals for listing or delisting a species, or delineating critical habitat in which significant economic values are involved or which involve significant curtailment of Federal programs or other economic activities should be accompanied by an inflation impact statement as required by the Executive Order cited.

It is important that the public and other Federal and state agencies be fully aware of the economic and social, as well as the environmental, implications of proposals enacted pursuant to the Endangered Species Act of 1973.

As stated by Roy Ash in his cover memo transmitting Circular No. A-107 to the heads of executive departments and agencies, "The President's intention is to make Government decisionmakers more sensitive to the hidden and often excessively costly consequences of prospective Government actions. Because this is an important part of the President's economic program, it is incumbent upon all of us to focus our analytical efforts on the full economic consequences of government's actions."

As with preparation of NEPA's statements, the public derives benefits when full disclosure is made of the various implications of proposed major Federal actions.

#### 4. Acquisition of private land for critical habitat

Section 5 of the Endangered Species Act provides that the government may acquire habitat for endangered and threatened species using Land and Water Conservation Fund Act monies. Acquisition of fee title under Section 5 should be used only as a last resort. There are a number of alternatives which ought to be pursued before acquisition is considered. In many instances, voluntary or even legally binding wildlife management plans can be developed with affected landowners which will insure adequate protection of the species within designated critical habitat areas. Often, less than fee title can be obtained through the acquisition of conservation easements which will restrict the management activities which can go on within those areas. Discretion as to use of this option should be left to the landowner.

When there is no other alternative for the protection of a particular species other than acquisition, land exchanges, rather than outright purchase, should be the priority method for this acquisition. Often a landowner will gladly accept title to another piece of land in another area much more readily than he would outright purchase of his land by the government.

The Refuge Revenue Sharing Act, as amended in 1964, provides in lieu payments to counties to replace losses of taxes from fee lands acquired by the Federal Government for wildlife purposes. This has significantly reduced county opposition to such acquisition. Even so, acquisition should be used only as a last resort. Federal acquisition of land for wildlife purposes essentially eliminates the benefits these lands are capable of providing society in terms of production of food and wood products. Admittedly other benefits will accrue to society as a result of wildlife habitat protection and management. However, in many cases this objective and that of commodity production are not mutually exclusive if proper land management practices are carried out. In these cases the best solution may be retention of the land in private ownership with appropriate long term cooperative agreements with the landowners for wildlife habitat management and protection.

### WILDLIFE POLICY STATEMENT OF THE FOREST PRODUCTS INDUSTRY (Submitted by National Forest Products Association)

#### PREAMBLE

One third of the land area of the United States is forest. The nation's forest lands are important to the social, economic, and spiritual wellbeing of the American people.

The forest industry of the United States has the responsibility of providing wood products for domestic use and foreign trade, manufactured at a reasonable cost from the timber resources of the nation's forest lands. While the forest products industry is primarily concerned with growing and harvesting timber, it understands and appreciates the importance of and the need for other uses of forest land. Wildlife habitat is one of these.

Because wildlife values are difficult to quantify, because the ecological principles governing wildlife populations are not widely known, and because the attitude of the forest products industry towards wildlife is generally misunderstood, the following is a statement of policy and position of the forest products industry on wildlife and the use of forest lands.

#### WILDLIFE AND THE FOREST COMMUNITY

The forest industry understands "wildlife" to mean every member of the animal kingdom, except man. Included are all mammals, fish, birds, amphibians, reptiles, mollusks, crustaceans, arthropods or other invertebrates which are not domesticated and are free and independent of man. Forest wildlife are

species of the foregoing which live in forests and on forest lands for all or part of their lives.

The forest is a unique wildlife habitat because of its three dimensional character. Some animals live in the upper tree tops, and their ability to survive is directly proportional to the height above ground of their habitat. Other species can survive only in thickets of brush or young trees, some never leave the ground, even to the extent of living in the soil and still others range throughout the forest.

The forest, like all natural biological communities, is dynamic. All trees are temporary residents, and even the most stable forest is subject to change because of natural forces of wind, fire, insects, and disease. The modifications created by these forces make the environment less suitable for some species of vegetation and more suitable for others. These dynamic changes also affect wildlife species. Human activities also contribute to the dynamism of the forest to the extent that they resemble those created by natural events.

No statement of the effect of human activities on forest wildlife can be meaningful unless the basic ecological principles governing forest disturbance and plant succession relative to the reaction of wildlife species are understood. An appreciation of the direct and indirect effects of the three-dimensional forest structure is vital to this understanding.

#### POSITION OF WILDLIFE

The forest industry recognizes the right of each landowner to establish single or multiple land use objectives. It is reasonable to expect that some landowners may wish to manage their lands primarily for the production of timber with wildlife as an incidental resource. It is also reasonable to expect others, especially governments, to manage their lands so that wildlife habitat management is coordinated with other uses and sometimes may be a primary use. In either event conflicts should be recognized if land use priorities are established for individual tracts of land.

When wildlife habitat is to be provided as a primary use or in concert with other uses, the actual output of timber may be less than the productive potential of the land. In establishment of priorities for forest land use, each landowner should recognize the use or uses which will maximize the sum of the human benefits available from the land. Before priorities are set, the impact of these land use determinations on both short and long term vegetative composition of a forest property and the resulting impacts on the members and kinds of wildlife species present on the area should be known. Each owner should then determine the effect the anticipated change in wildlife habitats and populations may have on the optimization of human benefits. A landowner should be individually responsible for determining land use priorities for his property.

It is recognized that state regulated harvest of game animals through hunting is a legitimate tool for managing wildlife population and in providing recreational opportunities on forest lands. It is also recognized that in certain situations animal numbers will need to be controlled artificially to prevent undue damage to other important resource values.

#### MANAGEMENT PLANS

Any land use objectives which recognize wildlife values at any level above incidental should be accompanied by a plan for the management of wildlife population and habitat.

In everyone of the United States wildlife is considered the property of the state. Objectives in terms of numbers and species are generally set by the state. Most landowners and public agencies find themselves in the role of managing wildlife habitat rather than populations. Consequently, coordination and understanding between those who manage wildlife habitat and those who control wildlife populations is necessary to satisfy society's need for timber and the needs of wildlife.

The forest industry recommends that any land management plan which provides for wildlife be specific and include the following:

- (1) Provision for specific action to meet wildlife management objectives, needs, and problems determined by the landowner or responsible manager.
- (2) Acknowledgement of the presence of threatened or endangered species

whose populations may be affected by forest management activities. If compatible with overall objectives, the plan should consider specific actions to maintain or create favorable habitat. Wildlife population authorities may recommend complete withdrawal of certain areas from all human use to protect a species. Such action should be taken only after developing full knowledge of its impact on the full social benefits from the land.

(3) Provisions for preventing unnecessary habitat alteration deleterious to previously determined wildlife population or species objectives when such is not in conflict with other management objectives.

(4) Provision for positive action to create or improve habitat in order to maintain or increase diverse wildlife populations as compatible with other land management objectives.

#### RESEARCH

Any land management plan can be effective only if based on accurate knowledge. An understanding of the processes and effects of vegetative disturbance is needed for successful wildlife management activities.

Understanding is also needed of wildlife population dynamics and of detailed characteristics of wildlife species. Many times actions are taken or stopped on incomplete knowledge. On other occasions the knowledge is available but not useful for decision makers. In some cases when circumstances have caused declines in important wildlife populations it has denied human use of essential resources when wildlife would not actually be harmed.

To help overcome these detriments to the valid application of wildlife management principles, the forest industry encourages increased public and academic wildlife research which objectively seeks to improve understanding of wildlife species and populations. This will help make decisions on basis of better knowledge. To this end, all research organizations should distribute their findings in a form readily understood by forest managers. Forest managers should use research findings to meet wildlife management problems.

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#### STATEMENT OF FRED G. EVENDEN, EXECUTIVE DIRECTOR, THE WILDLIFE SOCIETY

Chairman LEGGETT. Thank you very much for the invitation to appear before you this morning. It is a pleasure to offer some views on the endangered species program under the administration of the U.S. Fish and Wildlife Service.

As the Executive Director of The Wildlife Society, I will not usurp your precious time at this hearing to detail our association's composition and objectives, except to state that as the professional association for those working in the diverse disciplines encompassed in the wildlife management field we have had a deep and abiding interest in the fate of endangered and threatened species. Our formalized position statement on Endangered Species is included in our leaflet, *Ecopolicies of The Wildlife Society*, which I have brought for each of the committee and staff members. In that leaflet you may also read of the Society details to which I alluded.

Briefly, it is our policy to encourage legislation to safeguard endangered species populations, to oppose activities that jeopardize their survival or restoration, to foster research, to stimulate and support cooperative programs designed to protect or otherwise manage endangered species, and to encourage public support of each of these.

More specifically, we helped to plan and launch the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora in which some members of The Wildlife Society held prominent roles in their various professional capacities. Further, we were involved in development of the existing Act, and we continue in program contact with the Fish and Wildlife Service and as a member of the Nongame and Endangered Species Committee of the International Association of Game, Fish and Conservation Commissioners.

For purposes of this overview hearing, I will leave to others many of the problems and experiences with the Endangered Species Act of 1973 related to such things as legal interpretation, issuing of permits, et cetera.

It should be pointed out that the federal and state governments should be in partnership to carry out the purposes of this Act. You undoubtedly will hear from state representatives of many common problems. Two, in particular,

stand out. The Fish and Wildlife Service has been slow to contact the responsible state agencies, and because of the extreme amount of red-tape paper work, the states may be slow to respond to federal requests or directives. It is a two-way street in which much simplification and/or refinement seems warranted.

The professional aspects and implementation of actions to satisfy Act requirements need your serious consideration.

The Act deals primarily with individual species and their endangered or threatened status. This presumes precise information, which in turn demands scientific expertise. This expertise built slowly in the Service's Office of Endangered Species from a staff of 2 in 1971, to 5 in 1973, the year of enactment, to 12 the year after, and is now at a total of 17 professionals. Almost half of these hold Ph. D. degrees in those biological sciences closely related to wildlife management. The balance of the staff also have long ago proved themselves professionally.

There are continuing complaints that the endangered species program has been slow to meet the obligations of the Act. I can assure you that the small staff of earlier years had little time for scientific work because of the extremely heavy volume of Congressional, agency, association, and general-public inquiries. These time-and-money consumers, plus immediate "brush fire" endeavors (such as "Say Goodbye," "The Wolf Men," and alligators) diverted much staff effort from the Act's anticipated goals. Early staffers deserve much credit for their purposeful accomplishments under such circumstances. It is only within the past year or so that staffing and funding have permitted a satisfactory program to issue from the Office of Endangered Species. I say "satisfactory," but I do not mean "adequate."

Thoughtful persons have been deeply concerned with the impossibility of demands laid on by the species of the Act. There are thousands upon thousands of species of plants and animals around the world that probably should be listed pursuant to the Act. It has been stated that at least 36 professional man-days of staff work are required to put one species on the list. This staff load, plus all the notice times required by the Act elongate the listing-time process considerably. There are over 400 animal species on the U.S. threatened and endangered lists. The September 25, 1975 Federal Register has a proposal to add all 216 "Convention" species to the U.S. list. That still leaves impossible thousands of species of fauna and flora to be dealt with. Funding must increase, both for office staff programs and for use in contracts with outside expertise. But, without financing like the Fish and Wildlife Service has yet to see, completion of the Act requirements by the methods delineated will go beyond the life expectancy of any of us in this room.

There must be a better way to shorten the vast time span before us under Present Act procedures.

In addition to the continuing need for present program treatment on a species basis, there are other approaches that should be considered. One of these could be the preservation of diverse critical habitats. Basis for such a method may be found in "The Preservation of Natural Diversity," recently published by The Nature Conservancy. A copy of its summary is attached. This approach would encompass all species of flora and fauna within such a habitat. Listing and delisting such diverse habitats would cut the massive individual species workload by significant percentages, and, most importantly, would prevent the passage of too-many years that could be too late for many of the species intended to have salvation under the present Act.

You are encouraged to consider this and other alternatives with the Office of Endangered Species Staff.

In closing, let me urge all of us to keep in mind that the ultimate objective of the Endangered Species Program is to improve the lot of wild fauna and flora species so that they may be prevented from becoming candidates for the lists, and, if on the lists, so they may be removed from the list in the future. Program procedures should include means to facilitate action in either direction.

Thank you for your attention.

Enclosures: Wildlife Society Position Statement on Endangered Species and Summary of The Preservation of Natural Diversity.

## THE PRESERVATION OF NATURAL DIVERSITY: A SURVEY AND RECOMMENDATIONS

## EXECUTIVE SUMMARY

(A report prepared by the Nature Conservancy, 1975, submitted by  
Fred G. Evenden)

1. *The concept of natural diversity.*—Nature exists in an abundance of forms and at a variety of levels. The individual meadowlark, the Douglas fir, a swamp, the Chesapeake Bay are all parts of nature. Each form, each level has unique properties, some rarer than others, some more valuable to human beings than others. The concept of natural diversity, as a tool of that science—ecology—which affects us all, concerns itself with these unique properties and their distribution.

2. *The need to preserve diversity.*—We need to set aside, in viable units, adequate examples of the full array of extant ecosystems, biological communities, endangered species habitats, and endangered physico-chemical environmental features. There is good evidence that unless we do this now the degree of diversity which presently exists will be substantially diminished as a result of ill-planned uses of land and water. The effect of this diminishment will be to weaken the health and the stability of the ecological systems on which we depend. Nature is a healer of wounds. It has this power, we believe, largely in virtue of the fact that it is diverse and that when something, such as disease or a pest, expands abnormally, diversity works ultimately against a permanent imbalance. Similarly, each extant biological species, no matter how peculiar, is a potential resource of indefinite value. Unless the habitat which supports the resource is maintained, the species will become extinct and whatever value it may have possessed will be permanently extinguished. Diminishment of diversity also means that opportunities for scientific research will be lost, that the effectiveness of monitoring environmental degradation by reference to undisturbed ecosystems will be impaired, and that certain educational and aesthetic experiences will be limited.

3. *A nationwide system of ecological reserves.*—Numerous programs to protect natural areas already exist. These programs exist on the federal, state, and local levels of government and in the private sector. Our survey established that these programs lack coordination, with the effect that there are substantial redundancies and gaps if one looks at the totality of efforts to preserve the nation's natural diversity. Our survey also established that many of the programs which do exist preserve natural areas only as an incident of some more primary goal, such as recreation.

Accordingly, the primary recommendation of The Nature Conservancy is that: (a) Congress should establish a national policy to promote and protect natural diversity; (b) Congress should establish a Nationwide System of Ecological Reserves consisting of protected areas representative of the full array of North American ecosystems; biological communities, habitats and phenomena; and geological and hydrological formations and conditions. The nucleus of the system could consist of portions of existing programs, necessitating no management transfer. The system would develop through an ecological classification system, an inventory program, a registry, and certain protection requirements.

A National Ecological Reserve Board representing federal through private interests and supported by an adequate staff and a scientific advisory board should direct and coordinate reserve activities. A National Registry of Ecological Reserves should accompany the creation of the nationwide system. An ecological data bank, including access to existing data banks, should be developed.

Congress should recognize three categories of areas in the system: (1) endangered, unique and irreplaceable areas; (2) threatened areas; and (3) other areas contributing significantly to diversity. Category-one areas should be declared a public trust, and it should be illegal to damage or destroy them. Other appropriate protections should be established backing up this tri-partite categorization.

States should be encouraged, financially and otherwise, to create counterpart reserve boards and systems, to develop a reserve plan for incorporation in a national plan, to nominate areas for the nationwide system, and to establish legal protections for reserves. Certified private non-profit conservation organizations should be eligible for federal funds for ecological reserve purposes. Professional natural area expertise should be encouraged and developed through appropriate training programs.

Congress should direct federal agencies to inventory for reserve purposes, develop reserve plans, protect reserves, cooperate with states and other agencies in formulating plans and in other reserve system activities. Congress should further mandate agencies to insure they will not impact on reserve units or the system adversely. Reserve activities should be closely coordinated with general land use planning activities at all levels of government. The Board would best be able to perform its activities as an independent agency created by Congress; other organizational alternatives, however, are worthy of consideration.

Participation with other nations in ecosystem maintenance should be expanded.

4. *The Land and Water Conservation Fund.*—To make the ecological reserve system and associated activities possible, Congress should: (a) increase the authorized annual limit of the Fund to at least \$1 billion and appropriate this amount; (b) change the Federal/state ratio from 50/50 to 75/25 for (1) the planning and inventorying of state natural resources potentially eligible for inclusion in state or nationwide ecological reserve systems and for (2) acquisition of state and locally significant natural areas; (c) authorize a Federal/state ratio of 90/10 when states agree to acquire and manage nationally significant ecological reserves; (d) authorize use of the Land and Water Conservation Fund for acquisition of ecological reserves, regardless of an area's availability or nonavailability for on-site public recreation uses; (e) stipulate that a portion of Land and Water Conservation Fund apportionments to the state be based on state ecological reserve plans and acquisition programs and needs; and (f) authorize use of the Land and Water Conservation Fund by approved non-profit conservation organizations for the accomplishment of ecological reserve-related activities.

5. *Survey results.*—On the state level it was found that identifiable natural area programs fall into two categories: programs under the auspices of a single agency; and comprehensive programs cutting across the boundaries of separate agencies. Objectives and results vary widely. Funding is badly needed. On the private level, state, regional, and national organizations have undertaken a variety of activities and programs independently and in cooperation with government agencies.

Federal agencies were arranged into three categories according to their functions with regard to natural areas: Land Management; Funding; and General Activities. Some of the Federal entities clearly had more than one role in the natural area effort and were discussed in different sections. The Land Management category includes: the Energy Research and Development Administration (which includes the lands formerly administered by the Atomic Energy Commission); the Bureau of Land Management; the Forest Service; the Fish and Wildlife Service; the National Park Service; and the U.S. Army Corps of Engineers (particularly resource inventory activities). These agencies were selected because they have programs which deal with the acquisition, classification or management and use of natural areas. Funding agencies identified were: the Bureau of Outdoor Recreation; the National Oceanic and Atmospheric Administration; the Resource and Land Information program of the Geological Survey; and several other Federal agencies listed in other categories which have appropriate grants-in-aid or other funding activities. The General category includes: the Council on Environmental Quality; the Environmental Protection Agency; the Federal Committee on Ecological Reserves; the Federal Property Council; the General Services Administration; the National Science Foundation; the Office of Land Use and Water Planning (U.S. Department of the Interior); the Soil Conservation Service; the Water Resources Council; and the Energy Research and Development Administration.

The study used a definition of natural area which occasionally became elastic to accommodate different Federal programs which were interpreted to contain natural areas:

An area of land or water existing in its natural condition which either retains to some degree its primeval character or has flora, fauna, geological or archeological features of unusual scientific or educational value.

It was found that natural areas are sometimes defined as being limited to specified uses, such as scientific or educational, in order to avoid as much outside disturbance as possible (as in the case of the Federal Committee on Ecological Reserves' definition). Most types or classifications of established



natural areas, however, do not exclude such public activities as: hiking, photography, bird-watching, or other similar passive activities.

6. *Appendices.*—Appendix 1 is an analytic discussion of models of natural area protection from a legal perspective. The two models are Dedication and Recognition. Appendix 2 examines natural area legislation in over twenty states. Appendix 3 presents in the form of a table facts and figures on state natural area programs; Appendix 4 does the same for private programs. An index for the entire study is provided.

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STATEMENT OF SYDNEY ANDERSON, PH.D. ON BEHALF OF THE AMERICAN SOCIETY OF MAMMALOGISTS

Mr. Chairman, Members of the Committee: I appreciate the invitation to attend the hearings and to present this written statement. My name is Sydney Anderson. I am Chairman of the Department of Mammalogy at the American Museum of Natural History in New York City and the President of the American Society of Mammalogists, a professional scientific society with about 3,900 members. Our members include biologists with diverse interests in mammals—wildlife managers, physiologists, epidemiologists, zoo curators, ecologists, systematists, zoogeographers, etc. The Society has standing committees on Marine Mammals and on Conservation of Land Mammals, and has had a long history of concern for populations of wild animals.

We wholeheartedly endorse the intent of the Endangered Species Act. It incorporates biologically meaningful concepts such as the need to deal with populations of a species as well as with the entire species. It says that the welfare of endangered and threatened species must be given top priority in decisions affecting natural biotas, and it recognizes that biotas as such need preservation (the loss of habitat is as fatal to a population as the killing of the individuals directly would be). The first step is to get decision makers to think in these terms. The problems are immensely complex and the application of these principles will be difficult. It is an interesting question how protection of endangered species is to be balanced against other needs (see Lachenmeier, 1974, in *Environmental Law* magazine, vol. 5, no. 1, pp. 29–83, for a discussion of this problem).

My comments and questions, therefore, are intended to help make the act effective in meeting these basic goals.

Our members work with mammals, living and dead, in the field and in the laboratory or museum. You have been informed of some problems that zoo scientists have had in handling living specimens. There are also problems for other scientists. Basically the problems seem to arise principally from cumbersome, slow, or insensitive permit procedures. Overly complicated and overlapping regulations and difficulty in getting straight answers have been reported to me. We are concerned not only with this Act, but with other acts and regulations, such as (1) General criminal provisions relating to fish and wildlife, (2) Importation of Wild Mammals and Birds Act, (3) Lacey Act, (4) Marine Mammal Protection Act of 1972, and others. Hopefully, most of the problems in the administrative area reported to me will iron themselves out in the course of time. The *Compilation of Federal Laws Relating to Conservation* . . . (printed for your committee in January 1975) has been useful, but again I must state that our problems arise in the proliferation of rules, regulations, and permit procedures and in occasional instances of enforcement personnel whose approach is to try to convict some biologist of an inadvertent violation rather than help us learn what the rapidly changing rules are so we can abide by the law.

There is a tendency in legislation and rule making (as well as in science) to mistake theory for reality. I had the feeling at the hearing that many persons assumed that the placing of a name on the list of endangered species would somehow confer protection on that species. The fact is, it might or might not ultimately have this influence. There are many rare species in other nations that are not involved in commerce and whose placement on the list could not conceivably have any effect on anyone except some field biologist who would have several more permits to worry about.

Systematic biologists are especially concerned about natural ecosystems and organic diversity. The research of systematics is based on field work and on collections of specimens in museums and requires the shipment of specimens

on loan between museums, specialists, and graduate students for study. My department alone at the American Museum has about 5,000 specimens out on loan to more than 200 different institutions at any one time. These loans cross state lines and international boundaries, often in the mail. We need a blanket provision allowing free use and transport of scientific specimens between scientists and between museums. I have been told that some curators at the British Museum are reluctant to lend specimens for study in the United States because of the risk of loss by confiscation.

Perhaps we will need a "uniform act for museums" to clarify the diverse laws and regulations that already inhibit our scientific work and that now threaten to prevent us from doing much of it.

The "best available scientific data" referred to in the Act and needed for the implementation of the Act, is what we produce. Information to put a species on the list comes from field biologists and systematists who identify specimens, and information that is essential to enforcement comes from the same systematists. In the past year, for example, I have personally identified about one thousand specimens of mammals for agents of the Fish and Wildlife Service, for enforcement purposes.

Now I am a biologist, not a lawyer, so I may be misreading or overreacting; however, it makes me uneasy to read regulations, promulgated by the Department of the Interior after consultation with museum people, that do not respond to our needs and that leave us options such as (1) ignore the perplexing regulations and risk prosecution, or (2) spend half our time in red tape instead of biology.

Biologists are, of course, humans and I know that a few are careless or downright devious. Most of us, however, wish to abide by the law and continue our studies.

The American Society of Mammalogists is willing, upon invitation, to provide data on endangered species and upon other matters concerning wild mammals, including the needs of the scientists who study them. We would be pleased to assist either your committee or the administrators of the Endangered Species Act and other such acts, in whatever ways we can.

Effective implementation, as pointed out by Chairman Leggett, will require cooperation and communication of legislator, administrator, and concerned citizens. It is in that spirit that I have prepared this statement and that I offer the services of our Society.

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WYOMING EXECUTIVE DEPARTMENT,  
Cheyenne, Wyo., September 15, 1975.

HON. ROBERT L. LEGGETT,  
*Chairman, Subcommittee on Fisheries, Wildlife Conservation and the Environment, House Merchant Marine and Fisheries Committee, Longworth House Office Building, Washington, D.C.*

DEAR MR. CHAIRMAN: I understand that your committee will be holding oversight hearings during September on the administration of the National Environmental Policy Act. I would appreciate it if you would include my remarks in your committee's record.

The State of Wyoming has helped prepare environmental impact statements for federal agencies in connection with company developments, coal leasing, reclamation projects, forest service land use proposals, airports, roads, and other projects. The state assisted in the preparation of approximately eight federal EIS's in fiscal 1974. The state also reviews federal EIS's on projects of particular importance. To conduct a thorough review on all federal EIS's having some impact in Wyoming would require an excessive output of time and money. Although exact figures are not available, a survey of various state agencies indicates that at least \$500,000 a year is spent on reviewing federal EIS's and assisting with their preparation.

Generally, state agencies have commented that the EIS process is worthwhile and has not yet become an undue burden but could become so if the volume increases significantly. However, in the case of one agency, an excessive amount of time, money, and personnel were being consumed by the EIS process. It was noted that there is a need for uniformity in EIS procedures among federal agencies, which might be achieved by better coordination or by standardized guidelines. Another criticism of the general process was that decisions often appear to be made at the end of the draft EIS, with preparation of the final EIS being merely a formality.

Specific EIS's were criticized for being too long and involved, with excessive repetition. The statements are not well indexed. Occasionally, there are conflicting statements within the same EIS. There are too many personal opinions not based upon facts. The quality of EIS's varies widely. Some statements have degenerated into justifications for proposed actions rather than tools for decision making. More attention is needed toward an assessment of who will profit and who will gain from the proposed development. Better editing would help solve many of these problems with individual EIS's.

It appears that too many EIS's are being done, particularly in the transportation field. The law only requires EIS's in the event of major federal actions having a significant impact upon the environment but EIS's are being required by some federal agencies for projects that are quite insignificant.

Further clarification is needed on the matter of who pays for EIS's. Perhaps some mechanism could be established whereby states would be reimbursed for their time and effort in preparation and review of federal EIS's.

Thank you for your committee's consideration of these matters.

Sincerely,

ED HERSCHLER.

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NATIONAL AUDUBON SOCIETY,  
Washington, D.C., October 31, 1975.

HON. ROBERT L. LEGGETT,  
*Chairman, Subcommittee on Fisheries & Wildlife, House Merchant Marine Committee, Washington, D.C.*

DEAR MR. CHAIRMAN: Unfortunately, no one from the National Audubon Society was able to be present at the Subcommittee's oversight hearings on endangered species, but we would like to submit the following comments for the record.

Overall, we think the Endangered Species Act of 1973 was an excellent piece of legislation, but as is the case with many comprehensive laws, putting it into effect has been a slow and complicated process. While recognizing that the Fish and Wildlife Service has severe personnel and funding problems, we still think that clumsy administration of the Act has hindered its progress.

In reference to the amendments suggested by the Interior Department:

We have no objection to eliminating the 90 day comment period in emergency situations.

We do not object to amendments to permit interstate shipment or sale of animals lawfully held in circuses or zoos at the time of passage of the Act, provided that the transactions occur between institutions or organizations which are able to provide adequately for the care of the animals.

We do object to permitting the sale of endangered species products, even though they were lawfully held at the time of enactment. Although the proposed amendments set up a mechanism to maintain inventories and sales records, we still fear that this will be exceedingly difficult to enforce—and that there may be efforts to sell products that were really not lawfully held at the time of enactment. Further, we think continued sale of these products will only stimulate demand.

We do not object to waiving the 30-day notice period for comments when the health or life of an endangered animal is at stake. However, in all other cases we view the notice provision as being very important in informing the public and the outside scientific community just what permits are being requested.

Although most of the permits are non-controversial, from time to time requests are made for projects of dubious merit or scope. For example, the Fish and Wildlife Service itself applied for a permit for the endangered species propagation program at the Patuxent Research Center which would've given the Center virtual carte blanche. We believe that Interior's own research should be scrutinized just as carefully as that of other applicants.

Finally, it is our understanding that the amendments relating to enforcement authority are covered in HR 5523. However, it might still be a good idea to clear up this section of the Act.

Although we are not aware of any other specific amendments being considered by the Committee, we would certainly oppose any that weakened the basic structure of the Act.

Thank you for your consideration of our views.

Sincerely,

CYNTHIA E. WILSON,  
*Washington Representative.*

NATIONAL SPELEOLOGICAL SOCIETY, INC.  
COMMITTEE ON CONSERVATION,  
SUBCOMMITTEE ON ENVIRONMENTAL IMPACT,  
*Vancouver, Wash., October 29, 1975.*

HON. ROBERT L. LEGGETT,  
*Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, House Committee on Merchant Marine and Fisheries, Rayburn Building, Washington, D.C.*

DEAR MR. LEGGETT: I understand that your subcommittee has been conducting oversight hearings into implementation of the Endangered Species Act of 1973. At the time of these hearings I was Conservation Chairman of the NSS, and would appreciate it if the following remarks could be entered into the hearing record on behalf of the NSS Conservation Committee.

In September 1974, after scientists working with the NSS Endangered Cave Fauna Task Force had submitted data regarding the status of some 67 species of cave fauna to the Office of Endangered Species, I petitioned on behalf of the NSS for a review of the status of these species. I had previously been assured by the OESIA that sufficient data was in their files to justify such a review. I received no reply to my petition until February, 1975, shortly after the Freedom of Information Act amendments went into effect. At that time, I was informed that the review would take place, but it was not until April 28 that the notice of review was published in the Federal Register. It is my belief that the delays in replying to my petition and in initiating the review were possibly caused by a shortage of staff in the OESIA, but I also feel that there may have been political considerations involved. After all, most people believe that cave fauna are not as important as the more obvious animals such as mammals. However, it is the National Speleological Society's belief that cave fauna are perhaps more endangered than many other fauna, and are just as deserving of the protection of the Endangered Species Act. I would like this information to appear in the record, in the hope that in the future OES policies will be modified to assure that prompt attention is given to petitions for review.

There is also another problem with the Endangered Species Act of 1973 that concerns me, as well as many others with whom I have talked. That is the problem of existing specimens of the various endangered species which may be in private and museum collections, which are useful to the scientific community for study and identification purposes. It is my understanding that the Act is currently being interpreted by the OESIA in such manner that possession of these specimens is considered illegal. This is, in my opinion, an unfortunate situation and it should be remedied either by changes in OES policy or by legislative changes in the Act, to allow for possession by qualified individuals or institution of dead parts of endangered species which were taken prior to the enactment of the Act.

Sincerely,

ROBERT R. STITT, *Director.*

AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS,  
EXECUTIVE OFFICES AT OGLEBAY PARK,  
*Wheeling, W. Va., September 25, 1975.*

HON. ROBERT LEGGETT,  
*U.S. Congress, Rayburn Building, Washington, D.C.*

DEAR MR. LEGGETT: I am writing you regarding the oversight hearings on the Endangered Species Act of 1973 which your subcommittee will be conducting on October 2, 1975.

Representatives of the national zoo and aquarium organizations will appear before you on that day to present some of our problems in dealing with that piece of legislation. I would only ask your sincere attention to these people and ask for some action by Congress to alleviate the burdensome restrictions.

In essence, many zoos, including ours, have had to separate breeding pairs of endangered species because it is terribly cumbersome to dispose of the youngsters born to these pairs. In light of this, I submit that to control captive born specimens the same way wild caught specimens are controlled which restrict captive reproduction is unrealistic and counterproductive to the essence of the legislation.

In conclusion, I support my representatives that will appear before you and know that a useful exchange of information will ensue.

Sincerely,

WILLIAM E. MEERER,  
*Superintendent, Sacramento Zoo.*

FRANCO, ASIA, BENSUSSEN & COE,  
ATTORNEYS AT LAW,  
*Seattle, Wash., September 30, 1975.*

HON. JOEL PRITCHARD,  
*House Office Building, Washington, D.C.*

Re: Subcommittee on Fisheries & Wildlife; oversight hearings commencing September 30, 1975 or thereafter regarding Amendments to Endangered Species Act of 1973.

DEAR MR. PRITCHARD: I write this letter on behalf of the firms and their respective attorneys listed below who are among numerous enterprises in the Pacific Northwest who are vitally interested in legislation amending Section 9 of the Endangered Species Act of 1973 so as to permit the sale and shipment of interstate commerce of legally acquired inventories of whale bone, teeth, ivory and baleen.

For about 75 years firms in this area have been manufacturers and suppliers of whale products for the souvenir market in Alaska. Their inability to dispose of their inventories of whale product, in which many have substantial investments, has resulted in severe economic hardship and substantial unemployment.

We note that representatives of both the Department of Commerce and Department of Interior in statements presented to the June 10, 1975 Hearings have emphasized that to provide an exemption would relieve the hardships which are suffered by our people and many others, would at the same time allow the products to be used beneficially, and would not lead to additional taking of endangered whales.

We ask that any exemption legislation clearly apply to all commercial uses of bones and teeth of the order Cetacea, including ivory and baleen and not be limited to any narrow usage. Historically, these products have been used not only for scrimshaw work associated with the whaling industry of the last century, but also, and particularly in the Northwest, for the carving and etching of two and three dimensional figurines, bracelets, beads, and the like.

We would appreciate your having this letter entered into the record of the current Hearings and your calling our concerns to the attention of the members of the Subcommittee.

Very truly yours,

BENJAMIN S. ASIA.

The firms on whose behalf this letter is written are: Northwest Arts & Crafts, represented by this firm; Leonard Porter, Inc., represented by this firm; James L. Houston, Inc., represented by Short, Cressman & Cable; 3000 Sea-First Bank Building, Seattle, Wash. 98154; Indian Arts & Crafts, Inc., represented by Casey, Pruzan, Kovarik & Shulkin, 18th Floor Pacific Bldg., Seattle, Wash. 98104; Western Novelty Co., represented by Gary Lekas, 418 Morgan Bldg., Portland, Oreg., Oceanic Trading Co., represented by Jones, Grey, 14th Floor Norton Bldg., Seattle, Wash. 98104; and H.K.L. Johnson Co., represented by this firm.

HOGAN & HARTSON,  
*Washington, D.C., May 22, 1975.*

HON. DALE KENT FRIZZELL,  
*Acting Secretary of the Interior, Department of the Interior, C Street, Washington, D.C.*

DEAR MR. SECRETARY: This office represents the Fund for Animals, a non-profit membership organization engaged in conservation and protection of endangered and threatened species. We are writing in connection with the failure of the Department of the Interior (hereafter "Department") to comply with the clear mandate of Section 4 of the Endangered Species Act of 1973, 16 U.S.C. § 1533.

Section 4 of the Act requires the Department to prepare a list of endangered and threatened species, giving "full consideration" to species which have been designated as requiring protection "pursuant to any international agreement". The most important and comprehensive agreement in this area, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (hereafter "Convention"), ratified by the United States Senate on August 2, 1973, lists approximately three hundred and seventy-five species as "endangered and threatened with extinction". Three separate executive departments, the Department of the Interior, the Department of Commerce, and the Department of State, agreed that these species were "endangered".

The Endangered Species Act of 1973 was designed to implement the Convention by providing immediate unilateral protection to those species found "endangered" by the Convention. In the 16 months since passage of the Act, the Department has neither considered nor placed approximately one hundred and seventy-five of these species on the United States Endangered Wildlife (Species) List, 50 C.F.R. § 17.11, § 17.12. As a result of the Department's illegal inaction, hundreds of species and thousands of animals are still capable of being traded, captured, and destroyed. The purpose of this letter is to formally request that the Department take immediate action to fulfill its statutory obligation by adding all species found "endangered" by the Convention (listed on Appendix I to the Convention) to the United States Endangered Wildlife (Species) List and providing other requested relief.

The Endangered Species Act of 1973, P.L. 93-205, 16 U.S.C. §§ 1531 et seq. (hereafter "Act"), is the third in a series of legislative enactments designed to provide expanded protection for endangered species. In 1966, Congress passed the first Endangered Species Act,<sup>1</sup> which authorized the Department to conserve and protect native wildlife threatened with extinction. Congress broadened the scope of our endangered species program in 1969 when it enacted the Endangered Species Conservation Act,<sup>2</sup> which authorized the Department to prepare a list of species threatened with world-wide extinction. From 1969 until 1973 the Department listed approximately 405 such species as endangered.

Congress recognized that the United States could not unilaterally protect species throughout the world. Therefore, the 1969 Act called for the convening of an international conference on endangered species. The United States initiated, organized and hosted such a conference, the World Wildlife Conference,<sup>3</sup> in Washington February 12-March 2, 1973. In remarks welcoming representatives of eighty governments who participated in the Conference, Secretary of the Interior Rogers Morton stated that the threat to the wildlife of our earth is in a sense a threat to mankind from the degradation of our environment: "The rate of extinction [of species] has been on the rise dramatically. Of the recorded extinctions of mammals over the last 2,000 years, fully half have met their final fate within the last 60 years. It is sad to acknowledge to ourselves that during the 10 years we have been preparing for this meeting, perhaps 8 percent of all recorded mammal extinctions have taken place."<sup>4</sup>

The World Wildlife Conference culminated in adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. The Convention established a system for regulating international trade in species which are or may be in danger of becoming extinct. Protection of a species commences under the Convention when it is listed in one of three Appendices, or endangered species lists. Appendix I lists species imminently threatened with extinction which are or may be affected by trade. Trade in Appendix I species is virtually prohibited. Species not yet threatened with extinction but which may become so are listed on Appendix II and can only be exported with approval of the exporting country. Appendix III consists of species identified by a country as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation and also requiring export permits once listed.

The United States played the leading role in drafting both the text of the Convention and the species to be listed on Appendices I and II as well as

<sup>1</sup> Endangered Species Preservation Act of 1966, P.L. 89-669 (80 Stat. 926).

<sup>2</sup> P.L. 91-135 (83 Stat. 275).

<sup>3</sup> Officially called "A Plenipotentiary Conference To Conclude An International Convention on Trade In Certain Species of Wildlife."

<sup>4</sup> Statement by Secretary of the Interior Rogers C. B. Morton to World Wildlife Conference Feb. 12, 1973.

actively urging adoption of the Convention. Our representatives were acutely aware that species on Appendix I were in critical danger of extinction and required urgent protection. They advocated use of the strongest possible provisions to protect these species: "[W]e support the concept of an Appendix I, listing the critical cases, and Appendix II, for the potentially endangered ones. Appendix I species are in such short supply that no trade at all should be allowed except for purposes of propagation where such trade will not further endanger the species and where the objective is to increase its numbers for ultimate reintroduction into the wild."<sup>5</sup>

Once the participants agreed on the terms of the Convention, the United States acted promptly, consistent with its role as initiator and principal architect of the World Wildlife Conference, to comply with the letter and spirit of the Convention. Congress ratified the Convention on August 2, 1973, and passed the Endangered Species Act of 1973 in December of that year.

The Endangered Species Act of 1973 requires the Department, in coordination with the Department of Commerce, to take regulatory steps necessary to prevent the gradual extinction of the world's animal species. As you know, the primary mechanism for protecting species is the listing of a species as either "endangered"—i.e., threatened with extinction, or "threatened"—i.e., likely to become endangered in the foreseeable future. Once a species is listed as "endangered", it is unlawful to import, export, possess, deliver, sell or ship such species in interstate or foreign commerce, or harass, harm or capture any such species within the United States and its territorial sea, or on the high seas. 16 U.S.C. § 1538(a)(1).

One of the principal objectives of the Act was to implement the recently concluded Convention. See 16 U.S.C. § 1531(4); H. Rep. No. 93-412, 93d Cong. 1st Sess. July 27, 1973; S. Rep. No. 93-307, 93d Cong. 1st Sess. July 1, 1973. The Act expanded the Department's power to protect species by authorizing creation of the "endangered" and "threatened" list. These lists correspond to those used in the Convention, although the Department has latitude to provide greater protection than afforded under the Convention by imposing stricter restrictions on trade, taking, and transport of Appendix I species and by including species on the "endangered list" even though they do not appear on Appendix I.<sup>6</sup>

Section 4 of the Act, 16 U.S.C. § 1533, authorizes listing of a species if it is endangered or threatened by any of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, sporting, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; or (5) other natural or manmade factors affecting its continued existence.

In determining whether a species should be listed, the Secretary must utilize "the best scientific and commercial data available to him," taking into consideration efforts of foreign nations to protect species within its jurisdiction. Moreover, in furtherance of the Convention, the Secretary was specifically required to give special consideration to species listed in international agreements:

"(3) Species which have been designated as requiring protection from unrestricted commerce by any foreign country, or pursuant to any international agreement, shall receive full consideration by the Secretary to determine whether each is an endangered species or a threatened species." 16 U.S.C. § 1533(b)(3) [emphasis added].

Three hundred and seventy-five species of animals are listed on Appendix I of the Convention as imminently threatened with extinction throughout the world. These species meet on or all of the factors set forth in Section 4 of the Act. Three different cabinet-level departments—Department of the Interior, Department of Commerce, Department of State—agreed to the inclusion of these species in Appendix I of the Convention as "endangered" and urged immediate unilateral action by the United States to protect said species. Congress responded by both ratifying the Convention and passing the Act as implementing legislation. Yet the Department has taken virtually no action to list or even properly consider for listing one hundred and seventy-five

<sup>5</sup> Comments of Russell Train, Chairman of the United States delegation to the World Wildlife Conference Feb. 12, 1973.

<sup>6</sup> Although bound to comply with protective measures embodied in the Convention, nations may adopt stricter domestic measures and may protect species not included in Appendices I, II, and III. See Article VIII, XIV of the Convention.

species listed on Appendix I which are not presently afforded "endangered" protection.

Not one species has been added to the endangered list in the sixteen months since passage of P.L. 93-205, according to a recent status report supplied by the Fish and Wildlife Service.<sup>7</sup> In addition, the Department has only placed three species on the threatened list. This record of neglect speaks for itself. The Department has failed to consider or list approximately one hundred and seventy-five species on Appendix I of the Convention. These one hundred and seventy-five endangered species are set forth in Appendix A of this letter by Latin and scientific name, corresponding to their listing in the Convention. For your assistance, Appendix B to the letter contains all three hundred and seventy-five species on Appendix I of the Convention.

Failure to fully consider and list the one hundred and seventy-five species on Appendix A hereto which the Department based on the best scientific evidence and in agreement with eighty other nations, had agreed were endangered in March, 1973, when they were placed on Appendix I to the Convention, has thwarted the determined congressional and administrative objective of expanding the Endangered Wildlife (Species) List to provide protection for species which are threatened with imminent extinction.

It is sad indeed that the Department, which argued forcefully that urgent action by the international community was needed to protect 375 endangered wildlife, and then urged Congress to implement the Convention immediately so "critical" problems facing endangered species could be alleviated, is now the principal factor in delaying such protection. Since many Appendix I species are not listed and the Convention is not yet effective, trading, hunting, etc. of these endangered wildlife continues unabated. In fact, these species may be even more vulnerable since being included on Appendix I of the Convention. As Russell Train, Chairman of the United States Delegation, stated:

"It will probably be some months before this Convention is ratified by the 10 nations required for it to come into force. In addition, it will be considerably longer before the 80 nations present today have all ratified the convention.

"During this period all nations must be especially protective of their endangered wildlife. The appendices to this convention could, in the hands of unscrupulous persons, be used as a 'shopping list' of plants and animals. The knowledge that these species are to be controlled, together with the grandfather clause exempting hides and goods taken prior to the convention coming into force, could create high demand and prices for these goods."<sup>8</sup>

As the Department is aware, the tenth nation ratified the Convention on April 9, 1975. Consequently, the Convention enters into force on or about July 8, 1975. Thus, the period of interim protection has lapsed without the Department providing any protection to the species on Appendix I. Now the Department has a further obligation. It must enact regulations in conformity with the Convention to protect species on Appendix I. The only reasonable means of achieving this result is to immediately list all Appendix I species on our Endangered Wildlife (Species) List. Only by listing these species will they be given the full scope of protection required to comply with the objectives of the Act. Existence of these species on Appendix I is *prima facie* evidence of their endangered status. Additional delay by a notice of review or publishing proposed regulations cannot be tolerated. Every day that passes increases the risk that some of these species may become extinct.

The Fish and Wildlife Service has claimed that budgetary and manpower limitations are to blame for failure to list species in compliance with the Act. With regard to some species not on Appendix I this may well be a problem. However, the Department cannot use manpower or budgetary limitations as an excuse for failing to list the species found on Appendix I. The endangered status of these species has already been determined and the United States Government joined in that determination. Additional "review" is superfluous and unnecessary. This nation is committed by treaty to provide full protection for these species. Congress has indicated this protection should

<sup>7</sup> Letter from Lynn Greenwalt, Director, Fish and Wildlife Service, to Senators Magnuson, Hart, Byrd and Cranston, April 11, 1975.

<sup>8</sup> Comments of Russell Train to World Wildlife Conference March 2, 1973.



include all the provisions of our Endangered Species Act, including regulation of interstate and foreign commerce. Therefore, all endangered species on Appendix I of the Convention should be immediately placed on our Endangered Wildlife (Species) List.

On April 16, 1975, the Department of State sent a letter (Appendix C, attached) to Mr. Curtis Bohlen, Deputy Assistant Secretary of the Interior, informing him that the Convention will become effective in July. The State Department urged the Department of Interior to comply with the Act and Convention by listing species found on Appendix I within the short period remaining:

"I hope that Interior will use this period of grace [between now and July] to reconcile some of the differences between the convention and our own Endangered Species Act of 1973. There are, of course, considerable discrepancies between the two—particularly in the separate lists of endangered animals which accompany the Act and the Convention [Appendix I]. These discrepancies will cause trouble for both our Departments if they are not eliminated before July 9."<sup>\*</sup>

The Department has failed to fulfill its statutory obligation to fully consider the status of all species found endangered or threatened by international agreements. The Department has further failed to comply with the intent of both the Endangered Species Act of 1973 and the Convention on International Trade in Endangered Species of Wild Fauna and Flora by not adding approximately one hundred and seventy-five species found "endangered" by said Convention to our Endangered Wildlife (Species) List. Therefore, we request that the Department of the Interior, in coordination with the Department of Commerce, take the following steps without delay:

1. Publish notice in the Federal Register that, pursuant to authority contained in the Endangered Species Act of 1973, the Secretary of the Interior intends to list, for the reasons set forth above, the species on Appendix A to this letter as endangered to be effective sixty days after publication of said Notice. This Notice shall permit comments within forty-five days, as provided by Section 4(f) of the Endangered Species Act.

2. Sixty days after the above Notice, publish notice in the Federal Register adding all the species listed on Appendix A hereto to the Endangered Wildlife (Species) List, 50 C.F.R. § 17.11, § 17.12, except that where significant new facts are presented evidencing a decrease in the threat to a species since March, 1973, a public hearing shall be scheduled.

3. Publish a notice of review of each species listed as "threatened" on Appendix II of the Convention which are not presently listed on the Endangered Wildlife (Species) List, pursuant to Section 4(c)(2) of the Act, 16 U.S.C. § 1533(c)(2), requesting responses within sixty days, and publish your decision on the "endangered" or "threatened" status of each species on Appendix II thirty days thereafter.

4. Propose and adopt rules and regulations establishing procedures to ensure that all species listed as "endangered" or "threatened" by international agreements are reviewed and considered for listing within a reasonable time in the future.

5. Take whatever additional internal action is necessary to ensure that the Department reviews, considers, and publishes decisions on all species it has reason to believe are endangered or threatened.

We urge your prompt attention to this request. If the above-described violations of the Act are not remedied as requested within sixty days, we intend to pursue other legal remedies, as provided by Section 11(g) of the Act, 16 U.S.C. § 1540(g).

Very truly yours,

STUART P. ROSS,  
DENNIS WHITTLESEY,  
MARTIN KLEPPER,

*Attorneys for Fund for Animals, Inc.*

<sup>\*</sup> Letter from Lindsey Grant, Acting Deputy Assistant and Secretary for Environment and Population, Department of State, to Mr. E. U. Curtis Bohlen, Deputy Assistant Secretary of the Interior, April 16, 1975.

U.S. DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
*Washington, D.C., July 1, 1975.*

MESSRS. STUART P. ROSS, DENNIS WHITTLESEY, AND MARTIN KLEPPER,  
*Hogan & Hartson,*  
*815 Connecticut Avenue, NW.,*  
*Washington, D.C.*

DEAR MESSRS. ROSS, WHITTLESEY, AND KLEPPER: This responds to your May 22 letter requesting, among other things, that we list as endangered many taxa in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

While there are numerous unsubstantiated allegations and incorrect statements in your letter, we agree with the substance of your position and intend to proceed with the listing of most of the species transmitted to us. It should be understood, however, that the listing of these species will require a great deal of work and will provide very little additional protection to the foreign species than that which will be provided by the implementation of the Convention on July 1. The inevitable consequence of this action will be that species of plants and animals that are not on the appendices of this Convention and that may be in trouble will be receiving no protection under the law of this country or any other country until such time as we are able to complete this inordinately large undertaking.

At a recent meeting with the Council on Environmental Quality, it was concluded that an environmental assessment and perhaps an environmental impact statement will be required to be prepared in conjunction with this procedure. Accordingly, it is anticipated that the listing process could take a year or more.

Our next action in this regard will be to publish a proposed rulemaking for the Appendix I species as soon as the necessary papers can be drafted. After publishing the proposed rulemaking in the Federal Register, we will initiate: (1) the preparation of necessary status information on these species, (2) the preparation of an environmental assessment and (3) consultations with States, foreign countries and others as required by the Endangered Species Act. Following the completion of the environmental assessment, a determination will be made whether an environmental impact statement must be prepared. For your information, we are enclosing a copy of the listing process as required by law and deemed necessary by the U.C. Fish and Wildlife Service. The process is not quite as simple as your letter would seem to suggest.

Several of the taxa which you have requested to be listed under the Endangered Species Act of 1973 are under the jurisdiction of the U.S. Department of Commerce. Consequently, we have sent a copy of your request to personnel in that Department for their consideration.

Sincerely yours,

CURTIS BOHLEN,  
*Acting Assistant Secretary of the Interior,*

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U.S. DEPARTMENT OF COMMERCE,  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,  
NATIONAL MARINE FISHERIES SERVICE,  
*Washington, D.C., August 1975.*

MESSRS. STUART P. ROSS, DENNIS WHITTLESEY, AND MARTIN KLEPPER,  
*Hogan & Hartson,*  
*815 Connecticut Avenue, N.W.,*  
*Washington, D.C.*

DEAR MESSRS. ROSS, WHITTLESEY, AND KLEPPER: This is in response to your letter on behalf of the Fund for Animals, Inc., to the Honorable Dale Kent Frizzell concerning species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (the "Convention"). As noted in the Department of the Interior replay to you dated July 1, 1975, your letter was referred to us for consideration.

You had requested that the Department of the Interior, in coordination with the Department of Commerce, list as endangered, pursuant to the Endangered Species Act of 1973, 16 U.S.C. 1531 et seq. (the "Act"), those species appearing in Appendix I of the Convention which are not presently listed on the U.S.

endangered Wildlife List. You also requested that Department to initiate status reviews pursuant to the Act on taxa in Appendix II of the Convention which are not presently listed on the U.S. Endangered Wildlife List. The purpose of these status reviews would be to propose listing the taxa, where appropriate, as either endangered species or threatened species.

We share your concern that the Convention species not listed on the U.S. Endangered Wildlife List be examined for possible listing. Several of the taxa which you have requested to be listed or reviewed pursuant to the Act are under the jurisdiction of the Department of Commerce. We have met with representatives of the Department of the Interior and the Council on Environmental Quality to discuss program and procedural requirements under the Act. However, we recognize, as did the Department of the Interior in their response to you on this subject that the review and listing process is involved and time-consuming and may not result in any additional protection for certain species. This effort is rendered more difficult inasmuch as our Department has received no specific appropriations for our endangered species program.

Pursuant to the Endangered Species Act of 1973 and the August 28, 1974 Memorandum of Understanding between the Department of Commerce and the Department of the Interior, regarding endangered species jurisdictional responsibilities, those species under the jurisdiction of the Department of Commerce which are listed on the Convention but not on the U.S. Endangered Wildlife List are : (1) Appendix I—Atlantic sturgeon, Ganges River dolphin, Caribbean monk seal, Hawaiian monk seal, and northern elephant seal; and (2) Appendix II—Baltic sturgeon, coelacanth, southern elephant seal, South American fur seal, Galapagos fur seal, Juan Fernandez fur seal, Guadalupe fur seal, loggerhead sea turtle, flatback sea turtle, green sea turtle, and Pacific ridley sea turtle. This agency, together with the Department of the Interior has already proposed that the green, loggerhead, and Pacific ridley sea turtles be listed as threatened species under the Act. Nine of the remaining 13 species are marine mammals, and therefore receive protection afforded by the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) which prohibits, with certain limited exceptions, the taking and importation of these animals. In addition, all of these species have received protection since the Convention entered into force on July 1, 1975, by virtue of Section 9(c) of the Act which makes it a violation of Federal law for "any person subject to the jurisdiction of the United States to engage in any trade in any specimens contrary to the provisions of the Convention, or to possess any specimen traded contrary to the provisions of the Convention . . . ."

Until such time as status reviews have been completed which support a determination to list as endangered species or threatened species or not to list at all, the National Marine Fisheries Service is proceeding in the following manner: With respect to the aforementioned species on Appendix I and Appendix II which are marine mammals: No permits will be issued pursuant to the Marine Mammal Protection Act of 1972 unless the requirements of the Convention appropriate to the status of the species have been met. In addition, no permits will be issued pursuant to the Marine Mammal Protection Act of 1972 for public display of Appendix I animals.

It should be noted that while the United States delegation to the Convention evaluated the status of many species for proposed inclusion on the Appendices, it did not do so for all species proposed by other nations. For some species, the United States delegation simply did not object to the proposed listing.

We appreciate your expression of concern for the conservation of these species.

Sincerely,

ROBERT W. SCHONING,  
*Director.*

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THE FUND FOR ANIMALS NEWS RELEASE OF OCTOBER 1, 1975  
(Submitted by Lewis Regenstein)

In testimony before a congressional committee today, The Fund For Animals accused the U.S. Department of Interior and Commerce of jeopardizing the survival of hundreds of rare and endangered species. The Fund charged that by virtually ignoring The Endangered Species Act of 1973 and failing to enforce and implement an international treaty, these agencies are dooming to extinction countless disappearing species of wildlife that could otherwise be saved.

The basis for this charge is contained, outlined, and documented in a 15 page statement (copy attached) given as testimony today before The House Subcommittee on Fisheries and Wildlife Conservation and the Environment. The Fund urged the committee to demand that Interior and Commerce stop ignoring the mandate given to them by Congress to protect endangered species, and begin abiding by Federal law and international treaty obligations.

The Fund's position was summed up by the executive vice president Lewis Regenstein: "We cannot sit back and let hundreds of imperiled species go down the drain, while indifferent bureaucrats look the other way. We are determined to try and save for future generations what is left of our rapidly vanishing wildlife heritage. If we cannot do that, we can at least point out those responsible for allowing the extinction of these species to occur."

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(Submitted by Lewis Regenstein)

[From the Washington Post, *Saturday, March 15, 1975*]

THE WASHINGTON MERRY-GO-ROUND: AGENCY STALLS WILDLIFE PROTECTION  
(By Jack Anderson and Les Whitten)

During the past century, predatory men have wiped out approximately 10 percent of all known animal species. Another 10 percent are close to extinction.

To protect our wildlife, Congress finally pushed through the Endangered Species Act in 1973. This gave the government broad, sweeping powers to stop the slaughter of the vanishing species.

Yet today, the endangered animals are in as much peril as they ever have been. The reason is that the act has been entrusted to balking bureaucrats to administer.

The Endangered Species Office was placed under the jurisdiction of the Fish and Wildlife Service, which has a close relationship with the hunting-fishing lobby. Our sources report that the Fish and Wildlife bureaucrats are obstructing the experts who were brought in to protect the disappearing wildlife.

The main function of these experts is to determine which animals should be listed as endangered, thereby bringing them under government protection. But the experts keep tripping over the bureaucratic red tape.

During the first full of the act's existence, not one species was placed on the endangered list. Yet biologists claim at least 400 species are threatened with extinction.

When the howls of the conservationists grew uncomfortably loud, the bureaucrats finally listed the kangaroo as a threatened animal. But the steps taken to halt the traffic in kangaroo hides were so weak that the President's Council on Environmental Quality protested.

The chief obstructionist is Keith Schreiner, a Fish and Wildlife associate director, who has direct authority over the Endangered Species Office. Our sources said he has held up many listings under pressure from the hunting lobby.

Explained one source: "Keith isn't an environmentalist. He's a bureaucrat. His first and primary concern is seeing that everything runs smoothly, that the wheels are always oiled."

At a recent staff meeting, Schreiner asked a biologist to name the two categories of endangered species. The man dutifully wrote down "threatened and endangered"—the common listings.

Schreiner quickly corrected him. The two types, he said were "controversial and non-controversial."

The meaning was clear to those who attended the meeting. Any listing of a species that might cause controversy should be handled very, very slowly.

In a talk with our reporter Ed Tropeano, Schreiner denied that he is obstructing the Endangered Species Act. He merely is laying what he called "a firm groundwork for the act." He has never delayed listing an animal for political reasons, he said, although he admitted he has sent staff reports back occasionally for more information.

The professionals on the staff disputed this. "When he requests more information," said one, "he's just stalling. It's a situation where you can never get enough facts."

Schreiner has been behind several delaying actions, according to our sources, including the following:

For over a year, staff biologists have been trying in vain to list the green sea turtle as endangered. In most places, this rare turtle is near extinction. Our sources say Schreiner is holding up action to save the green turtle because of opposition from commercial interests. When we asked Schreiner about this, he said he was awaiting a status report on the turtle before making a decision. Yet we have in our possession a voluminous status report, completed by his own staff last September, which states the turtle should be classified as endangered.

Last August, Schreiner personally received a memorandum warning that the American crocodile was being driven into oblivion by human habitation. There were only 11 nesting females left in the United States, declared the memo, with the total American crocodile population down to 300. Immediate action was required, Schreiner was told, to save the species. Yet he kept a staff report, recommending that the animal be listed as endangered, on his desk for a month and then sent it back demanding more information. He got the new facts in January, but he still hasn't acted, as of this writing.

Several species, which are known to be in danger of extinction, have been called to Schreiner's attention, without results. Among them are such animals as the clouded leopard, chimpanzee, glacier bear, Indian elephant and Mexican wolf.

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THE FUND FOR ANIMALS NEWS RELEASE OF MAY 27, 1975  
(Submitted by Lewis Regenstein)

U.S. Department of Interior accused of jeopardizing the survival of 175 endangered species by violating U.S. law and international treaty.

In one of the most important actions ever brought to save vanishing wildlife species, the Fund for Animals announced today that it was commencing legal action, through the Washington, D.C. law firm of Hogan & Hartson, to require the Department of Interior and Commerce to protect 175 critically endangered species by adding them to the U.S. government's endangered list.

In their letter to the Interior Department requesting that such action be taken immediately, it was clearly pointed out that by excluding these and other imperiled animals from the endangered list, our government is dooming to extinction scores of species that could otherwise be saved.

All of the 175 animals included in this request appear on Appendix I—the most endangered category—of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, agreed to by the U.S. and some 80 other nations in March, 1973, and which the U.S. Senate ratified on August 2, 1973. Despite the fact that the U.S. Government is obliged by Federal law and international treaty to protect these animals, almost half of the species on Appendix I are not on the U.S. endangered list, and are thus unprotected by Federal law.

The U.S. Department of State, in a 16 April, 1975 letter to the Interior Department, has also questioned Interior's violation of U.S. and international law, and urged the Department to fulfill its obligations by adding Appendix I species to the endangered list by July of this year.

The Fund's formal petition to the Interior Department was prepared and is being handled by attorneys Stuart P. Ross, Dennis Whittlesey, and Martin Klepper, of Hogan & Hartson. In their letter to Interior, they pointed out that the Department's inaction "has thwarted the determined Congressional and administrative objective of expanding the endangered wildlife (species) list to provide protection for species which are threatened with imminent extinction. It is sad indeed that the Department which argued forcefully that urgent action by the international community was needed to protect 375 species of endangered wildlife, and then urged Congress to implement the Convention immediately to that 'critical' problems facing endangered species could be alleviated, is now the principal actor in delaying such protection. Since many Appendix I species are not listed . . . trading, hunting (and other exploitation) of these endangered wildlife continues unabated. In fact, these species may be even more vulnerable since being included on Appendix I . . . As Russell Train, Chairman of the U.S. delegation, stated, ' . . . the knowledge that these species are to be controlled . . . could create high demand and prices for these goods.' "

In submitting the legal petition, the Fund's attorneys put the Interior Department in notice that if appropriate action were not taken within 60 days to

list these 175 species, further legal action would be initiated to force compliance with the law. The Endangered Species Act of 1973 was the implementing legislation for the Convention, and it requires the government to give special priority to species which have been designated as requiring protection "pursuant to any international agreement."

This legal action was taken only after prolonged attempts to persuade the Department of Interior and Commerce to carry out the provisions of the Endangered Species Act, which they have been virtually ignoring for a year and a half. Since the law was enacted in 1973, neither Interior nor Commerce has added a single animal to the endangered list, despite the greatly expanded authority given the government by the Act.

The fund is being assisted on this project by Henry Heymann, a former high State Department official who played a leading role in negotiating the Convention, and is now a Board member of the Fund.

The Fund's position was summed up by executive vice president Lewis Regenstein in Washington: "We cannot sit back and let hundreds of rare species go down the drain, while indifferent bureaucrats look the other way. We are determined to try and save for future generations what is left of our rapidly vanishing wildlife heritage. If we cannot do that, we can at least point out those responsible for allowing the extinction of these species to occur."

During the past 150 years, the rate of extermination of mammals has increased 55 fold. If (these) exterminations continue to increase at that rate, in about 30 years all the remaining 4,062 species of mammals will be gone—Dr. Lee M. Talbot, Senior Scientist, President's Council on Environmental Quality, Washington, D.C.

Since the new Endangered Species Act was signed into law in 1973, not a single species has been added to the U.S. government's endangered list. Among the hundreds of imperiled animals that are unlisted, and therefore unprotected by U.S. law, are 175 species on Appendix I—the most endangered category—of the Convention on International Trade in Endangered Species of Wild Flora and Fauna.

This international convention was agreed to by the U.S. and about 80 other nations in March, 1973, and was ratified by the U.S. Senate on August 2, 1973. U.S. officials involved in negotiating the agreement, in February and March, 1973 in Washington, were well aware that Appendix I species were in critical danger of extinction and required urgent protection. Russell Train, Chairman of the U.S. delegation to the endangered species conference (who was then head of the President's Council on Environmental Quality, and now heads the Environmental Protection Agency) said in an address to the meeting on February 12, 1973, "Appendix I species are in short supply that no trade at all should be allowed except for purposes of propagation where such trade will not further endanger the species and where the objective is to increase its numbers for ultimate reintroduction into the wild."

Animals on Appendix I but excluded from the U.S. list include:

The glacier bear, which is still legally hunted in Alaska ten months of the year, although only about 100 to 500 of these bears remain.

The clouded leopard and the marbled cat, two of the world's rarest cats.

The peninsular pronghorn antelope, which, according to the Interior Department, "only two or three small remnant groups survive."

The Caribbean monk seal, which is so rare that it has not been sighted in over ten years, and may be extinct.

The Indian elephant, which is known to be seriously endangered, but is still being imported into the U.S. This provides a drain on the remnant wild population, particularly since the normal way of capturing young elephants is to shoot the mother and any other members of the herd that are present.

Under the terms of the Endangered Species Act of 1973, animals on the U.S. endangered list cannot generally be killed or captured in the U.S., nor can interstate trade in their products be allowed. By generally banning the import into the U.S. of foreign endangered species, the U.S.—which is a major market for furs, hides, and other animal products—can help foreign countries protect their wildlife by reducing the economic incentive for the killing of these creatures.

The law also created a new list of "threatened" wildlife, animals that are "likely within the foreseeable future to become endangered throughout all or a significant portion of their range." The only species that have been placed on this list are the large species of Australian kangaroos (which was only done

after the Fund threatened to go to court to force a ban on the import of the hundreds of thousands of kangaroo hides that had been flowing into the U.S. each year).

Although the grizzly bear is being added to the list, Interior's regulations would allow the state of Montana to continue selling about 1,000 grizzly hunting licenses each year, a figure which exceeds the total number of grizzlies remaining in the lower 48 states.

The Fund's petition also requests that the Interior Department conduct an immediate review of the majority of the 239 species on the Convention's Appendix II—the next most endangered category—to determine which of those not on the U.S. endangered list should be added to it or the threatened list.

Thus, hundred of endangered and threatened species remain unlisted, and therefore unprotected, by the U.S. government. Some of these animals (most of which are on Appendix II) include:

The American crocodile, the entire population of which includes only about 11 breeding females. An August, 1974 memorandum to the Interior Department's Office of Endangered Species from an expert on this species concluded that "immediate action is required" if the approximately 300 to 350 crocodiles remaining in Florida are to be saved.

The Cedros Island mule deer, found off the coast of Baja California, which the Interior Department admits is down to "less than a dozen."

The Mexican wolf, down to less than 200 individuals, which sometimes wander into the U.S. to be shot by ranchers.

The chimpanzee, perhaps man's closest living relative, which is seriously endangered due in part to the demand for "specimens" by medical laboratories, pet and wild animal dealers in the U.S. Baby chimps are most actively sought, which are obtained by killing the mother and seizing the terrified infant.

Interior has recently begun to move to add some of these species to the protected list, but whether or not final action will be taken remains to be seen. For some of these animals, protection will probably come too late to save them. It is puzzling that Interior has adopted a policy of sometimes waiting until an animal is down to less than a dozen before adding it to the list. By this time, it is usually too late to save the species, for it may have already passed the point of recovery.

Much of the responsibility for the Interior Department's intransigence can be attributed to middle level officials in the Department's Fish and Wildlife Service, such as Associate Director Keith Schreiner, who have prevented or delayed the listing of countless species because of political pressure, economic considerations, or bureaucratic red tape. For example, big horn sheep in the western U.S. have been kept off the list because of pressure from the hunting/firearms lobby; hunting is a major threat to the survival of these animals. This general situation has been brought to the attention of Assistant Interior Secretary for Wildlife, Nathaniel P. Reed, and Lynn Greenwalt, Director of the U.S. Fish and Wildlife Service. Both officials have endorsed the "cautious", do-nothing approach, so as not to offend vested interests, such as the gun lobby, which are exploiting rare species.

Interior's policy has already had tragic and irreversible consequences, since it appears that several species of unlisted mollusks and crustaceans have recently become extinct. These obscure life forms are important not only as an indispensable part of the food chain and in maintaining the natural ecological balance. According to an Interior Department news release, they have recently been recognized as being able to produce antibiotics, tranquilizers, antispasmodics, and antiseptic chemicals in their systems. Scientists believe that these unique attributes can be used as models for the development of synthetic drugs. Thus, with the recent extinction of some of these creatures, a potential cure for cancer may have already been lost. Moreover, hundreds of endangered mollusks and crustaceans are still being kept off Interior's list, despite efforts by conservationists to have them protected.

To make matters worse, there are indications that Interior, under pressure from the gun lobby, may be moving towards removing the African leopard and the eastern timber wolf (found in Minnesota) from the endangered list, so that large-scale hunting and the importing of trophies can be resumed.

The Interior Department's administration of the Endangered Species Act has been so irresponsible that Russell Peterson, chairman of the Council on Environmental Quality, sent a letter on February 3, 1975 to Interior Secretary Rogers Morton (who is now Secretary of Commerce) charging that several

policies being carried out by Interior are illegal. CEQ pointed out that Interior's proposed or adopted regulations for conserving kangaroos and grizzly bears did not provide these threatened species with adequate protection, and were "not consistent with the letter or spirit of the Endangered Species Act of 1973."

The U.S. Department of State has also questioned Interior's violation of U.S. law and international treaty obligations. On 16 April, 1975, Acting Deputy Assistant Secretary of State Lindsey Grant wrote to Deputy Assistant Secretary of Interior E. U. Curtis Bohlen, urging Interior to comply with the Endangered Species Act and the Convention by adding Appendix I species to the U.S. list by July of this year. Otherwise, warned Grant, "these discrepancies will cause trouble for both our Departments if they are not eliminated before July."

And on 21 March, 1975, a letter organized by Senator Alan Cranston (D-Calif.) and signed by three other Senators—Warren Magnuson (D-Wash.), Philip Hart (D-Mich.), and Robert Byrd (D-W.Va.)—was sent to Fish and Wildlife Service Director Lynn Greenwalt, expressing "serious and urgent" concern that Interior was not "pursuing the legislative intent of the Act and its mandates . . ."

The Commerce Department—which has jurisdiction over marine life such as whales, seals, dolphins, porpoises, fish, and sea turtles—has also adopted a policy of non-enforcement of the Endangered Species Act. It has refused to list some species of dolphins (or "porpoises") which are being wiped out by the hundreds of thousands each year by the U.S. Pacific tuna fleet, which intentionally nets entire schools of dolphins in the hope that yellowfin tuna will be found beneath them. Reports prepared by the Commerce Department's National Marine Fisheries Service (NMFS) show that one species of dolphin may be reduced by 30 to 80 percent, and that another may not be able to withstand further killing of this sort. Yet, NMFS Director Robert W. Schoning has refused to recommend these dolphins for the threatened or endangered list for fear that this will offend the powerful U.S. tuna industry. He has also refused to release information on the number of these dolphins being killed at the present time.

NMFS has actively prevented Interior Department biologists from adding two Appendix II species—the green sea & the loggerhead turtles—to the endangered list for over a year and a half. In a 4 January, 1974 news release, the Interior Department proposed these turtles for the endangered list and pointed out that "green sea turtle stocks in the Caribbean, once believed to have numbered at least 50 million, now are estimated at less than 10,000. Reproductive potential may be destroyed in the near future if present harvest levels are maintained." Soon afterwards, NMFS stepped in, claimed jurisdiction over sea turtles, and, under pressure from commercial interests, prevented action from being taken. On 12 June, 1974, Howard Pollock, Deputy Administrator of the Commerce Department's National Oceanic & Atmospheric Administration, stated at a symposium on endangered species, "I see no reason in the world why the green sea turtle shouldn't be placed on the (endangered) list and I am certain that it will be. I would assume some action will be taken in the next two or three weeks."

Yet, almost a year and five months after the Interior Department's announcement, the turtles are still unlisted. All during this period, the U.S. has remained a major market for sea turtle products, and has continued to exert a tremendous demand for their slaughter. The Departments of Interior and Commerce have now agreed on a proposal to list the turtles as "threatened" instead of "endangered," and to largely allow commercial imports to continue for at least two more years.

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MONITOR, INC.,  
1346 CONNECTICUT AVE., N.W.,  
Washington, D.C. July 22, 1975.

HON. STANLEY K. HATHAWAY,  
Secretary,  
Department of the Interior,  
Washington, D.C.

DEAR MR. SECRETARY: We were surprised and disappointed to be informed that when the Convention on International Trade in Endangered Species of Wild Fauna and Flora entered into force on July 1, 1975, the Department of the



Interior had not made any preparations for its implementation. We understand that the Department instructed the Division of Law Enforcement of the Fish and Wildlife Service that it should not enforce the Convention since the necessary regulations had not been issued. At best, it now appears that it will be about a minimum of six months before the United States will implement the Convention.

This lack of preparation for the Convention's implementation is particularly difficult to understand since it has been almost two years since the Senate's ratification of the Convention. As a consequence of these two years of inactivity, the U.S. Government is acting in violation of the Convention and the Endangered Species Act of 1973 which makes it *inter alia* "unlawful for any person subject to the jurisdiction of the United States to engage in any trade in any specimens contrary to the provisions of the Convention."

In addition, we are quite concerned with the negative effects which U.S. negligence of convention provisions may have on other nations. The United States hosted the World Wildlife Conference of February-March 1973, which concluded the Convention. At the Conference the United States took the lead in seeking to make the Convention as protective as possible. It stressed that time was of the essence in bringing the Convention into force. The Chairman of the U.S. Delegation, Mr. Train, stated:

"Secretary Morton in his opening remarks clearly presented the need for international action to protect endangered species through control of trade. He spoke of the need for urgency. This point can hardly be overemphasized. The pace of bureaucracies is slow and deliberate, but the pace of extermination is rapid and accelerating."

In short, the United States, through the inactivity of the Department of the Interior, is not following up on its own words and acting expeditiously to seek to halt the rapid extinction of species. This lack of continued leadership, we fear, will result in a slow-down of the ratification and implementation of the Convention by other countries.

We hope that in the drawing up of the regulations for the implementation of the Convention the primacy of conservation will be maintained and that it will not be sacrificed for the gain of wildlife-using interests. As stated by Mr. Train at the Wildlife Conference, "I would emphasize that the basic objective of the proposed convention is conservation to help assure that presently endangered species do not become extinct and that species presently safe do not become endangered." It is of particular importance to us that the Scientific Authority, in making its decision on export and import licenses will, as stipulated in the Convention, make its decision solely on whether the proposed action will endanger the survival of the species.

We have also heard that consideration is being given in the Department of the Interior to reducing the number of species on Appendix I of the Convention by downgrading them to Appendix II or removing them entirely. We are utterly opposed to this as conservationists but would also like to point out that the United States, as witnessed by the United States position paper for the Convention, viewed this as a potential danger and sought to make it more difficult to downgrade species than to upgrade them when amending the Appendices.

This letter expresses the views of the following Monitor organizations: Animal Protection Institute, Fund for Animals, Defenders of Wildlife, National Parks and Conservation Association, Humane Society of the United States, American Littoral Society, Chesapeake Chapter, American Littoral Society, Society for Animal Protective Legislation, International Fund for Animal Welfare—U.S.A., Sierra Club, Friends of the Earth, Environmental Policy Center, and Wilderness Society.

We would appreciate a reply to this letter at an early date.

Sincerely,

MILTON M. KAUFMANN  
*President.*

U.S. SENATE,  
*Washington, D.C., July 9, 1975.*

HON. STANLEY K. HATHAWAY,  
*Secretary of the Interior,  
U.S. Department of the Interior,  
Washington, D.C.*

DEAR MR. SECRETARY: On July 1, 1975, the Convention on International Trade in Endangered Species of Wild Fauna and Flora came into force. As host

country for the 1973 diplomatic conference on endangered species, the United States played an important role in the drafting of this convention and was the first country to ratify it on January 14, 1974. The Endangered Species Act of 1973 was designed in part to meet these anticipated treaty obligations. However, in spite of our long participation in the work on this convention, the United States is not ready to implement it as it comes into force.

Under the terms of the convention, each ratifying country must designate a Management Authority, which would be responsible for processing all permits required for imports and exports of animals and plants as well as for actually monitoring the shipments. A Scientific Authority was also to be set up to advise the Management Authority when trade might endanger a particular species.

In the United States, the Department of the Interior has primary responsibility for carrying out the provisions of the Endangered Species Act of 1973 and the convention. Yet neither the Management nor Scientific Authorities have been designated and no new regulations on the export of wildlife have been issued. Switzerland, which is the depository government for the convention, has already contacted the United States about our failure to designate the appropriate authorities.

I am deeply concerned at the lack of readiness of the United States to assume our obligations under this convention and would like to know what specific steps are being taken or are planned to insure our full participation in its work. A projected timetable would be helpful.

With best wishes,

Sincerely,

ALAN CRANSTON.

U.S. SENATE,  
COMMITTEE ON COMMERCE,  
Washington, D.C., March 21, 1975.

Mr. LYNN A. GREENWALT,

*Director, Fish and Wildlife Service, Department of the Interior, Washington, D.C.*

DEAR MR. GREENWALT: As you know, we have been closely involved in legislation resulting in the Endangered Species Act of 1973. We are, therefore, deeply concerned at reports that have reached us in recent months that your office is not pursuing the legislative intent of the Act and its mandates with the vigorous advocacy the Congress clearly had in mind when it enacted the Endangered Species Act of 1973, as well as its legislative precedents. We are especially concerned at the charges raised in Jack Anderson's Washington Post column of Saturday, March 15, alleging dilatory tactics on the part of your office and associates that have brought this vital program to a virtual standstill.

If Mr. Anderson's allegations are correct, then the Congress must act with speed to bring the administration of the Endangered Species Act into full and immediate compliance with Congressional intent. Therefore, in order to assess what actions, if any, may be required, we ask that you provide us with a full and complete report on the activities of your office toward implementation of the various mandates of the Act, P.L. 93-205, and specific comment on the allegations contained in the Anderson column.

As you know, P.L. 93-205 finds biological extinction to be continuing threat domestically and internationally, states Congressional intent to conserve various species of fish and wildlife and plants domestic and foreign, and declares that the policy of the Congress is that "all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

In addition to your overall commentary of your understanding of and implementation of P.L. 93-205, we would appreciate commentary on these specifics;

Please provide us with a listing of those species that have been proposed for endangered and/or threatened status by the Department since enactment of P.L. 93-205, together with a listing of those species currently under review for threatened and/or endangered status, and the status of each review.

Although Section 7 of the Act directs all agencies, departments, and other instrumentalities of the Federal government to cooperate in implementation of the Act, it is our understanding that interagency meetings or formal communications have not occurred since enactment in December of 1973.

Section 8 of the Act sets forth a program of international cooperation toward the protection of endangered and threatened species. What progress has been made toward the full implementation of this section?

Under P.L. 93-205, the Smithsonian Institution was directed to review species of plants which are endangered or threatened. What progress is being made in carrying out the recommendations of this report?

The Act authorizes the Secretary to extend endangered and threatened species status to non-endangered or non-threatened species which resemble listed species if necessary to best assure protection of the latter. Has this authority been exercised in any instance? As you know, the lack of such authority was deemed to be a key weakness of the 1969 Act and one which the Congress sought to remedy, with strong encouragement by the Administration.

The Act provides for assistance of various kinds of implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora. It appears that the Convention will become a reality this year. What programs have been implemented under the authority of this section by the United States?

What have been the recommendations of the Service, the Department, and the Office of Management and Budget with regard to monies for habitat acquisition? The request at each of the three levels for FY 1976 would be useful.

In a letter from the Council on Environmental Quality to the Secretary of the Interior, dated February 3, 1975, the Council suggests that appropriate attention has not been paid to the management of public lands, and the species residing thereon, in the interests of all American. We would appreciate a precise statement of policy on this issue, and your specific response to the commentary by CEQ.

Please provide a detailed explanation of the Department's budget request for administration of the Act for FY 1975 and 1976, as well as recommendations submitted by the Fish and Wildlife Service relative to that budget request.

Finally, we wish to emphasize that we view this matter as both serious and urgent. We wish a detailed response, from Director Greenwalt, to reach us no later than Friday, April 11. The response should provide the kinds of detail that will be useful as the basis for public comment and for possible oversight hearings on implementation of the Act.

Sincerely,

WARREN G. MAGNUSON,  
*U.S. Senate.*  
PHILIP A. HART,  
*U.S. Senate.*  
ROBERT C. BYRD,  
*U.S. Senate.*  
ALAN CRANSTON,  
*U.S. Senate.*

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SUGGESTED QUESTIONS ON ENDANGERED SPECIES FOR INTERIOR DEPARTMENT  
(Submitted by Lewis Regenstein)

1. The Convention on International Trade in Endangered Species of Wild Flora and Fauna was ratified by the U.S. Senate on August 2, 1973, and went into effect around 1 July, 1975. Has the Interior Department implemented this treaty? Can animals on Appendix I—the most critically endangered category—still be traded in and imported into the United States? If so, why have regulations not been issued to prohibit this?

2. On 16 April, 1975, Acting Deputy Assistant Secretary of State Lindsey Grant wrote to Deputy Assistant Secretary of Interior E.U. Curtis Bohlen, urging Interior to comply with the Endangered Species Act and the Convention by adding Appendix I species to the U.S. list by July of this year. Otherwise, warned Grant, "these discrepancies will cause trouble for both our Department if they are not eliminated before July." What was your response to this letter? Why were the 175 species on Appendix I that are not on our endangered list not proposed for the list before last week? How long should the listing process for Appendix I species take?

3. It is estimated that there are only 100 to 500 glacier bears left, yet Alaska permits a ten month hunting season on it each year. Why is this bear not on

your endangered list? Since it was recently proposed for the list (since it is on Appendix I of the Convention), when do you anticipate that it will be listed?

4. The chimpanzee is known to be seriously endangered, yet it is still being imported into the U.S. in large numbers. This helps deplete the wild population, since the normal way of obtaining a primate from the wild is to shoot the mother and capture its infant. A report prepared some time ago by Interior's Office of Endangered Species states: "There are sufficient data to warrant a proposed rulemaking that the chimpanzee are 'threatened species' . . . the chimpanzee has disappeared from large parts of its original range, and is thought to be declining seriously in some places where populations still survive." Why has no action been taken to list and protect this species?

5. On 4 January, 1974, the Interior Department announced in a news release that it was proposing the green sea and loggerhead turtles for the endangered list because "green sea turtle stocks in the Caribbean, once believed to have numbered at least 50 million, now are estimated at less than 10,000. Reproductive potential may be destroyed in the near future if present harvest levels are maintained." On 12 June, 1974, Howard Pollock, Deputy Administrator of the Commerce Department's National Oceanic & Atmospheric Administration, stated at a symposium on endangered species, "I see no reason in the world why the green sea turtle shouldn't be placed on the (endangered) list and I am certain that it will be. I would assume some action will be taken in the next two or three weeks." Yet, almost a year and nine months after the original proposal, the turtles are still unlisted. The U.S. remains a major for sea turtle products, and has continued to exert a tremendous demand for their slaughter. Why are these turtles not on the endangered list? Why have the Departments of Interior and Commerce backed down on the original proposal to list the turtles as endangered, and instead have proposed them for the "threatened" list, with the proposed regulations allowing commercial imports to continue for at least two more years? Do your biologists feel that these measures will be adequate to protect these turtles and save them from extinction? When do you expect the final listing to take place?

6. A few days ago, several animals were belatedly added to the endangered list. Some of these were:

The Cedros Island Mule deer, which the Interior Department estimates is down to "less than a dozen."

The peninsular pronghorn antelope, which, according to the Interior Department, "only two or three small remnant groups survive."

The American crocodile, of which the entire population of less than 350 includes only about 11 breeding females. Over a year ago, in August, 1974, a memorandum to Interior's Office of Endangered Species from an expert on the species concluded that "immediate action is required" if these crocodiles are to be saved.

Why did it take so long to list these animals? Is it Interior's policy to wait until a species is down to just a handful to add it to the list? Shouldn't we try to list and protect species before they reach this point of no return?

7. The endangered Species Act provides protection to critical habitat essential to the survival of endangered species. Have you identified any such habitat for the grizzly bear or any other species? Why not?

8. Section 8 of the Act provides financial and other assistance to foreign nations to help them protect endangered species. What action have you taken under this section?

9. The Smithsonian Institution has identified over 2,800 species and subspecies of endangered and threatened plants in the U.S. alone. Why have none of these been placed on the protected lists? When do you plan to do so?

10. On 3 February, 1975, Russell Peterson, Chairman of the President's Council on Environmental Quality, sent a letter to then Interior Secretary Rogers Morton charging that several policies being carried out by Interior are illegal. CEQ pointed out that Interior's proposed or adopted regulations for conserving grizzly bears and kangaroos did not provide these threatened species with adequate protection, and were "not consistent with the letter or spirit of the Endangered Species Act of 1973." Why does Chairman Peterson feel that your policies regarding these species are illegal?

11. In his March 15, 1975 column, Jack Anderson made some serious charges against the Department's endangered species program and the man in charge of it, Keith Schreiner, who is Associate Director of the Fish and Wildlife Service. Schreiner was charged with being the "chief obstructionist" who "has

held up many listings" under pressure from various lobbies. What comments do you have on this article? It has been reported that Mr. Schreiner requested that a rebuttal report be prepared on the column. Could you provide this to us? What was its conclusion?

12. In the August, 1975 edition of the Interior Department's "Fish and Wildlife News," Schreiner was quoted as saying that, at the current rate of progress, "it would take us 6,000 years to list the 200,000 full species of (plants and) animals that are thought to be threatened or endangered now." Why will it take so long? Doesn't this indicate that the program is hopelessly tied up in bureaucratic red tape?

13. It has been reported that a report on the endangered species program has been prepared by a Mr. Kaylor Martinson, of the Fish and Wildlife Service. Can you provide us with an unedited copy of this report? What was its conclusion? Why has it not been made public?

#### COMMENTS REGARDING PROPOSED RECLASSIFICATION OF AMERICAN ALLIGATOR

(Submitted by Michael J. Bean)

The Director of the U.S. Fish and Wildlife Service, by notice of proposed rulemaking appearing in the Federal Register (July 8, 1975), has announced his intention to reclassify the American Alligator (*Alligator mississippiensis*). It is the purpose of these comments to point out the substantial problems of both a legal and practical character which are raised by the Director's proposal. The complexity of these problems, as elaborated upon below, requires that the Director rescind his notice of proposed reclassification.

##### I. THE DIRECTOR'S STATEMENT OF BASIS AND PURPOSE IS INADEQUATE TO SUPPORT HIS RECLASSIFICATION PROPOSAL

The Director's notice of proposed rulemaking in the July 8, 1975 *Federal Register* is notably deficient as a statement of basis and purpose for his proposed action. It is axiomatic that the Director's determination of whether a given species ought to be added to or removed from the "endangered" or "threatened" list pursuant to the Endangered Species Act of 1973 requires, at the very least, reliable information about that species' current and projected population levels. It is therefore surprising that the Director's statement of basis and purpose provides no concrete information about either current or projected populations in any area in which reclassification is proposed, and simply astonishing that such statement suggests that such information may not even exist. That is, although the Director's statement begins with the observation that some undisclosed "evidence" indicates that alligator populations are making "encouraging gains" in some areas while suffering "significant losses" in other "possibly ecologically marginal areas," and notes further that "actual numerical levels . . . may be below the biotic carrying capacity in most habitats," the Director's ultimate conclusion on the population issue is set forth in the following revealing sentence:

"Reorientation of enforcement efforts toward developing effective methods for controlling the commerce in parts and products of legally taken alligators would permit the realization of acceptable management procedures and a realistic reappraisal of the population status of the alligator." (Emphasis added.)

If, as the above sentence implies, no "realistic" appraisal of the alligator's present population status exists, the Director's proposal to remove the alligator from the endangered list in even part of its range is arbitrary and capricious and without any substantial evidence to support it.

To the extent that the basis for the Director's action is revealed by the Federal Register statement, it would appear that the number of human-alligator encounters is more important than the number of alligators. In light of the importance the Director seems to attach to this factor, several observations need to be made concerning it. First, increased numbers of human-alligator encounters have in all likelihood resulted not so much from increased numbers of alligators but rather from increased numbers of humans living in areas where alligators are found. The recent human population boom throughout the southern United States is amply documented, as is a decided shift in industrial location to the southern states. One result is that hitherto

remote and relatively inaccessible areas have been opened up for development and human occupation. That those same humans now encounter alligators with relative frequency is hardly surprising. Absent very special and compelling circumstances, however, this fact alone cannot justify a determination that the alligator, or any other species, is no longer endangered.

The Director apparently feels that such special and compelling circumstances exist, however, because of what he labels "public hostility" to the alligator. This hostility manifests itself in "malicious killings" which, together with illegal commercially-oriented killing, comprises the "primary threat" to the alligator's existence, according to the Director. If the Director genuinely believes that malicious and illegal commercial killings are the primary threat to the alligator's existence, he must then believe that his proposed solution of commercial exploitation will pose a lesser threat to alligator numbers and that less drastic measures, such as selective taking or translocation of specific alligators presenting a special threat to human life, will be ineffective. It is impossible to comprehend, however, how malicious and illegal commercial killings could ever exceed the "harvest" of alligators necessary to sustain the Director's contemplated lawful commercial industry of licensed tanners, fabricators and buyers. Accordingly, the Director's proposed solution is in reality a non-solution or perhaps even a solution to a non-problem. It is as absurd as, and in fact no different than, solving the crime problem by making everything legal.

The final observation that needs to be made regarding the human-alligator encounter problem concerns the Director's extremely short-sighted view of it. There is absolutely no reason to believe that the human population boom described above will not continue in those areas where the alligator is found. The Director is quite powerless to do anything about that. The Director also is unable to do anything significant to halt the destruction of alligator habitat brought about by the development and industrialization that accompanies human population expansion. Thus, the apparent recent increases in alligator populations may be both illusory and extremely temporary. In such circumstances, the Director's proposed lawful commercial exploitation may only hasten the day that alligator populations suffer a dramatic and catastrophic collapse.

## II. THE DIRECTOR'S PROPOSAL TO CONTROL THE COMMERCE IN ALLIGATOR PARTS IS UNWORKABLE WITHOUT A FORMAL COOPERATIVE AGREEMENT PURSUANT TO SECTION 6 OF THE ENDANGERED SPECIES ACT

The arguments advanced in Part I of these comments about the lack of reliable population data present a fundamental objection which, it is submitted, requires that the Director's notice of proposed rulemaking be withdrawn. If the Director thereafter determines to reissue the same or a similar notice, proposed Section 17.54 will need to be modified in several respects. The remainder of these comments shall address those changes which are required.

The most striking aspect of the regulatory scheme proposed in Section 17.54 is that it is expressly premised upon a state-administered tag system which may or may not ever be implemented. That is, the Director proposes to make the alligator available for commercial exploitation in certain parts of Louisiana on the assumption that Louisiana will utilize a tag system identical to that which it utilized during its last legal alligator hunting season, even though the Secretary of the Interior has never entered into a cooperative agreement with the state of Louisiana pursuant to Section 6(c) of the Endangered Species Act. Such a cooperative agreement is essential to the successful implementation of the present proposal because it provides a formal mechanism for an annual review of Louisiana's regulation of the taking of alligators and would also provide some degree of assurance that the tag system contemplated by the Director would be implemented. Without such a cooperative agreement, no formal means of review is necessarily available and the only means of protecting the alligator if Louisiana's regulation is inadequate is to begin a formal, and probably lengthy, proceeding to restore it to the endangered or threatened list.

The tag system which the Director contemplates is even less likely to be in effect in those states where the alligator is to be reclassified as "threatened." Nevertheless, proposed Section 17.35 would permit the parts of such threatened alligators taken in the course of law enforcement activities or to

protect human life to be sold "in the course of a commercial activity, provided these activities are done in accordance with § 17.54." This apparent inducement to kill alligators in states where they are threatened is utterly without any purpose given that such states would not have any reason to utilize the elaborate system of "hunter tags," "verification tags" and "shipping tags" apparently required by Section 17.54.

### III. THE DIRECTOR'S PROPOSAL TO ALLOW THE SALE IN INTERSTATE COMMERCE OF ALLIGATOR HIDES LAWFULLY OBTAINED PRIOR TO DECEMBER 28, 1973 IS UNLAWFUL AND UNWORKABLE

Although proposed Section 17.54 appears in Subpart E, entitled "Similarity of Appearance," and ostensibly deals only with alligators in three Louisiana parishes, in fact the Director has included therein a provision which is more far-reaching and plainly impermissible. Proposed Section 17.54(f) provides that all American alligator hides lawfully obtained prior to December 28, 1973, may be sold in interstate commerce to a licensed buyer, tanner or fabricator, provided a State official certifies that such hides were lawfully obtained. This proposal is flatly unlawful and would in any event be totally unworkable. The prohibitions of Section 9(a) of the Act are as much applicable to such hides as they are to alligators alive today because the Act defines endangered species of fish or wildlife to include "the dead body or parts thereof." The limited exception to the Act's prohibitions found in Section 9(b) is absolutely inapplicable "in the case of any fish or wildlife held in the course of a commercial activity." Accordingly, the Director's proposal is in flagrant violation of the Act which he is charged with administering.

Even if the Director's proposal were lawful, which it plainly is not, it would be totally unworkable. In the first place, it is unrealistic to expect that state officials will be able to exercise any meaningful control over the certification process inasmuch as the hides to be certified will have been obtained at least two years prior thereto. Secondly, the proposed regulation would literally permit certification to be done by any "State official" without any limitations whatsoever. Thirdly, no requirement that such hides be tagged in the manner contemplated by the remainder of proposed Section 17.54 is imposed, yet without such a requirement it will be virtually impossible to regulate the interstate commerce in such hides and products made therefrom. Finally, because of all these practical problems, the absolute essentiality of formal cooperative agreements pursuant to Section 6, as argued in Part II of these comments, is underscored.

### IV. EFFECTIVE REGULATION OF INTERSTATE COMMERCE IN ALLIGATOR PRODUCTS REQUIRES THAT THE SIMILARITY OF APPEARANCE PROVISION OF SECTION 4(E) BE INVOKED AGAINST IMPORTATION OF PRODUCTS OF ALL CROCODILIAN SPECIES

There is an internal contradiction between the proposed regulations and the supporting statement on the legality of foreign commerce in alligator products. In the supporting statement, at 40 Fed. Reg. 28712, the following sentence appears: "The import and export of alligators or alligator products would be prohibited." Likewise, on the following page the comment is made that "... the Director has found it necessary to propose these rules to control the interstate trade in alligator hides and products, and to prohibit the import and export trade." Yet the proposed regulations themselves directly contradict both these statements. Proposed Section 17.54(e) provides as follows: "Parts or products of American alligators which have been marked by a licensed fabricator in accordance with paragraph (d)(3) of this section may be transported, shipped, delivered, carried or received in interstate commerce in the course of a commercial activity, and may be sold or offered for sale in interstate or foreign commerce." (Emphasis added.)

It is submitted that the last three words quoted above are inconsistent with the Director's supporting statement and should be stricken.

Even more fundamental to the issue of foreign commerce, however, is the Director's failure to invoke the "similarity of appearance" provision of Section 4(e) against the importation of products of all crocodilian species. One of the most serious enforcement problems likely to emerge when legal commerce in alligator products resumes concerns the importation of alligator products made from illegally taken alligators smuggled abroad and fabricated there. Such products, when in the form of shoes, purses, key cases and a host of other small items will be virtually indistinguishable from products

made from other non-endangered crocodilian species. Enforcement personnel will certainly have substantial difficulty in attempting to differentiate between products made from such unlisted species and products made from illegally exported alligators. This difficulty will pose a substantial and addition threat to all endangered and threatened alligators. Accordingly, to facilitate the enforcement and further the policy of the Endangered Species Act, the Director should invoke the authority under Section 4(e) to prohibit the importation of products of all crocodilian species.

V. A FULL ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED BY THE NATIONAL ENVIRONMENTAL POLICY ACT BEFORE THE ALLIGATOR MAY BE REMOVED FROM THE ENDANGERED LIST

The National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* (1970), requires that environmental impact statements be filed for all "major federal actions affecting the quality of the human environment." The Director's proposal to downgrade the status of the alligator in certain parts of its range and to delist it altogether in certain other parts is such an action.

While a full environmental impact statement is probably not required each time the Director adds a species to the endangered or threatened list, and may not even be required for certain special instances of de-listing, there can be no question but that the proposed downgrading of the alligator's status is a major action requiring a full impact statement. First, the geographic area affected is substantial; the status of the alligator is to be downgraded in six states. Second, indirect effects will necessarily be felt by those states in which the alligator's status is not to be changed because the commercial exploitation of the alligator in one area will serve to increase the incentive for poaching of alligators in other areas. Finally, the Director cannot question the fact that his proposed action will affect the quality of the human environment because he has himself urged one aspect of the quality of that environment, i.e., the frequency of human-alligator encounters, as a major justification for his proposed action. Accordingly, the Director must withdraw his proposed reclassification of the alligator until a full environmental impact statement has been filed.

VI. THE PROPOSED DEFINITION OF "HARASS" IS FULLY JUSTIFIED

The Director's notice of proposed rulemaking includes several provisions of general applicability which are not specifically related to the alligator. One such provision is the general definition provision contained in proposed Section 17.3. One definition contained therein, that of "harass," seems especially worthy of commendation. The proposed definition would function to prohibit significant environmental modification or degradation which harms endangered or threatened wildlife. This definition, though

The Director is embarked on a course that will certainly lead him into an administrative morass solely to solve an apparent problem peculiar to three counties in a single state. The justification for such an action is totally lacking, and the potential threats it poses are far greater than any potential benefits. Accordingly, the Director must rescind those parts of his notice of proposed rulemaking which would change the present endangered status of the American Alligator.

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THE FUND FOR ANIMALS,

1765 P STREET NW.,

Washington, D.C., September 23, 1975.

HON. NATHANIEL REED,  
Assistant Secretary of Interior,  
U.S. Department of Interior,  
Washington, D.C.

DEAR SECRETARY REED: Once again, the survival of Australia's kangaroos is largely in your hands.

In January of this year the former Minister of Customs and Excise, Kep Enderby, and the former Minister of Environment, Moss Cass, yielded to commercial and state pressures by relaxing the export ban on kangaroo skins for New South Wales, and South Australia. The quota for New South Wales is an unprecedented 205,000 skins, which is more than the number of kangaroos killed there before the export ban went into effect, and the quota for South



Australia is 80,000 skins. These figures are indicative of the fact that neither state has an adequate program to insure the survival of the kangaroo.

Last week the new Minister of Customs and Police, James Cavenagh, again backed down to commercial interests by lifting the export ban for the states of Queensland, and Western Australia, which still lists the kangaroo as "vermin." No quota has been set for either state, but your Department has the power to greatly influence how many kangaroos will be killed there. An Australian Embassy official stated to me that "The quota will be determined on what the United States market will permit. Japan and Western Europe do not provide us with a large enough market for the present amount of skins which could be exported. We have made a series of representations to the Interior Department to lift the ban." It is obvious that commercial pressures rather than conservation have, and still are, providing the criteria as to the number of kangaroo skins which would be "legally permitted for export." (The illegal kill is at least half of the legal number, but is never taken into consideration by the wildlife departments.)

This fact alone would be sufficient data for your Department to retain the export ban on the 3 large species of kangaroos. It should prevent you from even giving consideration, despite the pressures being exerted on your Department by various interest groups, to relax the export ban for any Australian state.

In case you are unaware, I would like to bring to your attention a recent aerial study which was supposedly conducted over "17% of New South Wales." It was carried out by George Wilson, formerly of the National Parks and Wildlife Service of New South Wales and a staunch supporter of the kangaroo industry, and Graeme Caughley of the University of Sydney, and was sponsored by the Department of Environment. The importance of this "survey" is that the Department of Customs and Police, with the advice from the Secretary of Environment, Dr. Donald McMichael, is basing their export figures on what data Wilson and Caughley present. It appears to be setting a dangerous precedent for the other states to carry out similar non-objective surveys in order to support their high kill numbers. These researchers extrapolate from their survey that there are approximately 5-9 million kangaroos in New South Wales. This is an unrealistic figure which would not have been arrived at had conservationists participated in the survey. Therefore, the results of their "study" is subject to refutation.

Mrs. Mick Moxham who has lived in the outback most of her life questioned the validity of the survey which claims to have included her area. In letters to Minister Enderby, and Minister for Lands and Tourism in New South Wales, John Mason, she takes issue with the conclusions concerning the area in which she has lived over 40 years. The following is some of the text of her letter which provides documentation as to the misleading "evidence" of Wilson and Caughley. Mrs. Moxham quotes Dr. McMichael as saying "In your letter to Minister Enderby dated 26 May, 1975, you quote Mrs. Moxham as saying she has only 250 Grays and 36 Red kangaroos remaining on her property. A recent aerial survey passed within several kilometers of Mrs. Moxham's property, and a simple calculation reveals that there is probably over 2,500 kangaroos on Mrs. Moxham's property, and I find this discrepancy difficult to reconcile." Mrs. Moxham replies that "Surely after living here 47 years, Minister Enderby, I should know the number of kangaroos at any given time. The aerial survey Dr. McMichael refers to did not come within 100 miles of our property! His claim that we have over 2,500 kangaroos on our property is not only an absurdity, but an outright lie. I am a very experienced bush pilot of many years standing and have no hesitation in saying that numbers of kangaroos assessed by aerial surveys are at all times very suspect and unreliable. And when they come from Dr. McMichael they are even more suspect. He has shown himself by his public addresses and articles in the press to be a very strong supporter of the kangaroo industry. I have offered him the free use of my private aircraft if he will visit our property and get his facts straight." (So far he has not shown any interest in obtaining a first hand account of the true situation by accepting her offer.) In her letter to Mr. Mason she states further that "At the present time we would have at the most 300 kangaroos on our property, and no big Reds at all. In the whole area between the west Nanoi and East bank of the Darling it would be difficult to find any Big Reds in any reasonable numbers as there would have been 10 years ago. (Ironically, everyone confirms this fact except for

the wildlife departments and the kangaroo industry.) This is because the National Parks and Wildlife Service has not given sufficient attention to taking a census of numbers, and has allowed them to be overexploited by industry. I offered Mr. Lewis when administrator of the National Parks and Wildlife Service the free use of my aircraft and free fuel if he would come out and see the threat of the probable extermination before it was too late. He refused the offer. My husband and I have made generous offers to the National Parks and Wildlife Service, New South Wales state government, and Federal government to assist in surveys of the number of kangaroos on our property. We find instead an attitude of resentment that we, as graziers, dare to give total protection to our kangaroos and at the same time very successfully breed stud and commercial sheep, cattle, and horses. We achieve this successful co-existence by the only wise method of management of this area of western New South Wales by keeping our property at all times understocked, and by keeping our trees for drought feeding always lopped and healthy."

Furthermore, the kangaroo estimates are by and large projections of sample areas. However, if I were to do the same with other endangered or threatened species such as the whooping crane or the buffalo, one could easily conclude that there are millions of such animals. After traveling over 1,500 miles through the outback of New South Wales and seeing less than 45 kangaroos in the wild, I find it impossible to accept the validity of the survey.

May I repeat that it is up to your Department to a large extent to determine how many kangaroos will be killed in most of the Australian states. We therefore feel it is important that the ban on kangaroo skins be maintained.

Thank you for considering this letter.

Respectfully,

MARIAN NEWMAN,  
*Washington Coordinator.*

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[From Science News of the Week, Vol. 108]

#### ACTION FOR WILDLIFE: LESS THAN MEETS THE EYE

There has been, on the surface at least, some recent forward movement in the U.S. Fish and Wildlife Service's efforts to protect endangered animals and plants. Ten U.S. and Mexican animal species were proposed for addition to the official endangered and threatened species lists last week, and proposed regulations were published in the *FEDERAL REGISTER* for protecting 216 more animals and plants from around the world. Observers, however, in both the Government's endangered species office and the wildlife conservation movement, are taking the actions for less than surface value.

The final proposed listing of eight animals to the endangered list and two to the threatened list (those not believed in danger of imminent extinction) is a culmination of several years effort on their behalf by the Government and conservation groups. Listed as endangered were the American crocodile, the Cedros Island mule deer, the Peninsular pronghorn antelope, the Hawaii creeper, the Scioto madtom (a small Ohio fish), the Po'o uli (a Hawaiian bird), the gray bat and the Mexican wolf. Listed as threatened were the bayou darter and Newell's Manx shearwater.

After a required waiting period of 60 days, the species will be officially added to the 112 endangered and nine threatened species already listed by the U.S. Department of Interior. (There will be procedural delays, however, in listing the gray bat and Mexican wolf.) The new status will proffer to them the extensive protective machinery of the Endangered Species Act of 1973.

Conservationist Lewis Regenstein, head of the Washington-based Fund for Animals, is ambivalent over the listing. "Listing these animals is so long overdue that I just can't get too excited about it, even though they will be protected now. There are, for example, only 12 Cedros island mule deer left, and about a dozen breeding female crocodiles. The Department of Interior has had information on their imperiled status for *years*, and to me, it is just incredible that they could have waited so long. The Government," he says, "has obviously adopted a policy of waiting until a species is just about to perish and there are only a handful left before it will act."

In its other major action, the U.S. Fish and Wildlife Service, with its *FEDERAL REGISTER* publication, began the process for adding 74 plants and 171 more animals (most of them from outside the United States), to the endangered species list. These include several bread palm, aloe, mussel and

orchid species, and among many other animals, the Asian elephant, the grizzly bear, the peregrine falcon, several parrots and parakeets, the leopard, the jaguar, the lemur and the proboscis monkey. The 216 plants and animals are now listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This international agreement was written by the United States and 80 other nations in March 1973. It protects endangered wildlife from commercial international trade with some outright trade bans, and with the requirement that licenses be issued by both importing and exporting nations for most listed animals.

The United States, however, has yet to establish the specific rules and regulations to be used at ports of entry and, in effect, does not enforce the international agreement, Interior Department sources say.

The new action is apparently a step toward protecting the endangered Appendix I plants and animals, proposing to add them directly to the U.S. endangered species list and protect them from commercial exploitation in that way, rather than through the international agreement. But a government official in the endangered species office who refuses to be named told SCIENCE NEWS, "This action is just plain window dressing." Listing the 216 plants and animals in the usual manner would take "literally years" he says, "and this action is designed to obfuscate the fact that no action has been taken to write rules and regulations to implement the international agreement at our borders, even though it has been over two years since the conference, and we were the leaders in setting it up. The responsibility for this delay, he says, is "benign bureaucratic neglect," beginning with program chief Keith Schreiner.

Schreiner does not see things this way. "This window dressing idea," he told SCIENCE NEWS, "is dead wrong." Rulemaking progress is being held up by the Office of Management and Budget and President Ford's signature. "Once an executive order is signed to start the rulemaking, we could move ahead on it full speed. We could even begin to protect the animals and plants at our borders before the rules and regulations are laid down in writing. I hope that this all happens," he says, "within this calendar year."

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#### ECOLOGY FORUM NO. 17: ENDANGERED PLANT SPECIES: A SOLUBLE ECOLOGICAL PROBLEM

(By Robert E. Jenkins)

Following its mandate in the amended Endangered Species Act of 1973, the Smithsonian Institution prepared a first report on *Endangered and Threatened Plant Species of the United States* which was made public last winter. Prepared with the assistance of professional botanists from every region of the country, the report lists 2099 species of vascular plants which are thought to be extinct, endangered, or threatened in 49 states (Hawaii, with its fragile island biota, has a full half of its entire flora in critical categories and is treated separately in the report). For the mainland states, the listed species represent over 10% of the native higher plants.

This disturbing information can be treated as just another environmental horror story demonstrating our impotence in managing our affairs or it can be looked at more constructively. The problem is not so intractable as the raw statistics might suggest and can be broken down into a series of tangible units and tasks to which any individual or group could make a measurable contribution.

For the most part, endangered plant species are either localized endemics or more widespread species which occupy scattered parcels of specialized habitat. In other words, they do not occupy very much space today, and within the last several thousand years, at least, probably never did. As far as I can ascertain, there are no endangered plants whose situation is analogous to that of the peregrine falcon or the timber wolf—no once-widespread dominants which have been catastrophically reduced to the brink of extinction. Redwoods and ginseng have been decimated, but they are not endangered, and we probably couldn't eradicate them if we tried.

In almost every instance the story is the same: plant species which are presently threatened were always relatively rare and usually relatively localized, and they have been brought to their present precarious state indirectly—by destruction of their habitats. Some species or varieties have also been

reduced by direct exploitation, usually because they are horticultural curiosities, but this seriously affects less than a hundred. Habitat destruction is nearly always the main problem.

One red herring often thrown into endangered species discussions is the suggestion that the incipient extinction of all of these species might be "natural." There are a couple of ways of dealing with this contention. First, we know very little about extinction in nature. The great extinctions of the past (where have all the dinosaurs gone?) are the basis for endless speculation, but we actually know nothing whatever about them. We have observed localized population extinctions with subsequent recolonizations, but this seems to be just a way of life for many perfectly healthy species. We have seen whole species go extinct (though they usually wait until we're not looking to do it), but to my knowledge this has always been directly or indirectly at the hand of man. We often condescendingly say that certain seemingly ill-adapted species (like the preposterous double coconut of the Seychelles) are "on the road to extinction," but if natural events are overtaking them, it is at too slow a rate for us to measure. The speed at which this crisis has arisen is a tip-off, since these sorts of biological phenomena just don't operate at the frenetic pace of bulldozers and herbicides. As a rule of thumb, human activities are responsible for 99.999 . . . % of all present endangerment of species.

Another approach to the "let natural events take their course" argument is to inquire whether it is also supposed to apply to wheat and cows and *Homo sapiens*, all of which seem to possess as many intimations of mortality as other species. The first two, having suffered great changes at the hands of cultural selection, may now be incapable of existing under natural conditions, and the third could well meet its end under unique circumstances. Straw men aside, I suggest that we preserve species for our own purposes because we believe they have or could have value to us regardless of their biological destiny. The appropriate arguments hardly need repetition among Conservancy people, but the Smithsonian report stated the case with commendable brevity:

Many species of rare, endangered, and threatened plants grow in severe or unusual habitats and often possess qualities that make them particularly valuable to man: they help provide diversity and greater ecological stability, they stock unstable and unusual habitats, they are sources of medicines and other chemicals, they are bioindicators of minerals and metal ores, they possess potential value for food crops and horticultural use, and they provide man with sources of aesthetic value. Loss of any species of plant represents an irretrievable loss of unique genetic material or germ plasma that cannot be duplicated and narrows man's future options for his own use of the environment.

The endangered plant species situation can therefore be stated as follows: there are a goodly number of potentially valuable plant species scattered all over the country which are apt to be eradicated by human activities, primarily through habitat destruction, unless we do something.

The solution to this problem looks to be pretty straightforward. Even including some relatively obvious matters of legal protection covered in the Smithsonian report, the first and main recommendation is for the preservation of habitat. The task really ought not to be a daunting one.

Endangered plant species are first of all rarities, which means that this ten percent of the American flora occupies the very least amount of ground—I should guess no more than a small fraction of one percent. Narrowing our focus to just the 761 species classified as endangered, an estimated two-thirds of these can be found on federal lands, leaving only 250 to be dealt with on state and private property.

Assuming that some of these species are already on protected lands (e.g. Boggs Lake, California; Charles Harrold Preserve, Georgia), and that some are known to occur together in the same communities, we could perhaps create a minimum preserve system (which would at least contain one or more populations of each endangered plant species) by establishing only 50 to 100 new preserves. The Conservancy alone has been setting aside several times that number each year, and it is conceivable that with a little systematic effort we could fill the most critical gaps in such a system of habitat preserves in just a few years.

By the time this is published, Congress will probably have convened hearings to review performance under the Endangered Species Act. The hearings will probably be seized as an opportunity to attack the Act as detrimental to

our more important interests, a potential barrier to rapid economic progress, an unreasonable hindrance to doing whatever we think of next, etc. This is, of course, palpable nonsense. The conflicts which have arisen, or are likely to, are primarily caused by the lack of support the Act has received. A decent funding commitment for increased professional staff, assistance to ongoing inventory and data-gathering efforts, and the beginning of a habitat acquisition program in the near future could work wonders. If we could identify the critical habitat areas well before anyone begins pouring concrete on them, we could nearly always find equally good alternative development sites and at the same time the preservationists could focus their energies on positive means to protect the critical areas.

Because endangered plant species are tangible and widespread and because many of them could be adequately perpetuated on small to medium-sized preserves, there is a terrific opportunity presented to individuals who have been casting about for an effective way to contribute to a better environment. Finding endangered species localities is a major objective of our Heritage inventories, but we can use all the help we can get to conduct literature surveys, investigate museum collections, verify and evaluate localities in the field, or even, in some instances, to conduct field searches for as yet undiscovered populations of rare species. Encouragingly enough, since the report's publication, no fewer than three of the hundred species thought extinct have been rediscovered. After priorities are established, there will be lands to preserve, and one of the best ways to do this is still the traditional Conservancy way with project committees working on outright acquisition through gifts or bargain sales. Over the long run, such preserves will require management and the status of the target species will need to be monitored. This can be a most rewarding and educational way to participate.

There has been far too much unproductive wringing of hands over endangered species, at least in this country. Among the many important environmental tasks facing us, the preservation of endangered plant species is one of the most accomplishable. Let's just do it.

#### PATCHES AVAILABLE

Green and white patches embroidered with the Conservancy's oak leaf logo are available to Conservancy members for \$1.00. Write to Fran Angelone, Communications Department, at the national office.

#### SELECTED PAPERS ON ENDANGERED PLANTS OF THE UNITED STATES

(Submitted by Bruce MacBride)

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- Little, E. L. Jr. Our Rare and Endangered Trees. *American Forests* 81(7) : 16-21, 55-57 (July 1975).
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- Preston, D. J. Endangered Plants. *American Forests* 81(4) : 8-11, 46-47 (April, 1975).

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(Submitted by Bruce MacBride, Ph.D.)

#### ENDANGERED AND THREATENED ORCHIDS OF THE UNITED STATES

(By Dr. Edward S. Ayensu, Department of Botany, Smithsonian Institution)

During the preparation of the Smithsonian *Report on Endangered and Threatened Plant Species of the United States* (1974), which was requested by Congress in the Endangered Species Act of 1973 (Public Law 93-203, approved December 29, 1973), it became quite clear that in order not to reduce the credibility of the report, it was necessary that an attempt be made to put only plants that were in imminent danger on the lists. Through the kindness of many professional botanists, as well as knowledgeable amateurs, several states and organizations presented lists of endangered species. In preparing the final draft for publication, a decision was made to include only those orchid species that were truly endangered or threatened on a country-wide basis.

Virtually all of the 211 orchid species in the United States appeared on one state list or another as rare, endangered or threatened. This is understandable when we realize that orchids are being depleted by well-meaning enthusiasts as well as unscrupulous, financially motivated collectors. The only positive way to ensure their survival is to declare all of them as needing some form of protection. In fact, at the Plenipotentiary Conference on International Trade in Endangered Species of Wild Fauna and Flora held in Washington from 12 February to 2 March 1973, participating countries, including the United States, consented to place all orchid species under Appendix II of the Convention. This means that all trade in all species of Orchidaceae will be subjected, among other things, to export permits (I.U.C.N., 1973).

In determining the status of plants included in the Smithsonian Report, it became obvious that a plant species that is rare (i.e., a species that has a small population in its range) in one state may be extremely common in another state, hence from the standpoint of a national listing of rare and endangered species, that particular species was not included in the report. Three basic definitions in the Endangered Species Act of 1973 concerning the status of animals were modified slightly to cover plants in the Smithsonian Report. Endangered species are those species of plants in danger of extinction throughout all or a significant portion of their ranges. Existence may be endangered because of the destruction, drastic modification, or severe curtailment of habitat, or because of over-exploitation, disease, predation, or even unknown reasons. Plant taxa from very limited areas, e.g., the type localities only, or from restricted fragile habitats usually are considered endangered. Threatened species are those plants that are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges. This includes species categorized as rare, very rare or depleted. Recently extinct or possibly extinct species are those plants no longer known to exist after repeated search of the type localities and other known or likely places. Some species may be extinct in the wild but preserved in cultivation in botanical gardens or similar facilities.

The protection of orchids in the wild anywhere in the world is at best very complicated. This problem is acute in this country principally because of the social, aesthetic and economic importance attached to this undoubtedly most admired plant group. Unlike most tropical areas of the world, where most orchids assume an epiphytic posture, the majority of species of in this country are terrestrial. The rapid development of the land for agricultural purposes as well as the development of extensive infrastructure in all parts of the country has affected many natural areas where orchids grow. A glance at the distribution maps shows that endangered and threatened orchids seem to coincide with centers of intense human activity. *Cypripedium arietinum* is currently threatened in states such as New York, Massachusetts, Michigan,

Minnesota and Wisconsin; *Cypripedium californicum* is equally threatened in California and Oregon; *Encyclia boothiana* var. *erythronioides* is threatened in Florida. Equally alarming is the threatened status of *Platanthera pycnantha* in the states of New Jersey, New York, Pennsylvania, Delaware, Maryland, Georgia, South Carolina, Alabama, Mississippi, Tennessee, West Virginia, Kentucky, Arkansas, Indiana, Ohio, Illinois and Missouri. Of the truly endangered species the most obvious are *Isotria medeoloides*, reported from Rhode Island, New Hampshire, Vermont, Massachusetts, New York, Connecticut, Pennsylvania, Virginia, Illinois, Missouri, New Jersey, North Carolina and Michigan; *Platanthera unalascensis* ssp. *maritima*, *Triphora craigheadii* and *T. latifolia*, which are all confined to Florida.

On the accompanying distribution maps, the precise natural locality of the species is meant to have no relation to the location of its symbol within a county. Rather, the intent of the symbol is to indicate only the presence of the species somewhere in that county.

How, then, can these orchids and other plants that share similar environments be protected? The Smithsonian Report has recommended to Congress that "Preservation of endangered and threatened species of plants in their natural habitat should be adopted as the best method of ensuring their survival. Cultivation or artificial propagation of these species is an unsatisfactory alternative to *in situ* perpetuation and should be used only as a last resort, when extinction appears certain, with the purpose of re-establishing the species in its natural habitat." The thrust of this recommendation indicates that any further modification or destruction of rather critical habitats by man will only continue to decrease the population levels of the existing species, and thereby restrict any chances for continuing maintenance of such populations. It is a well known fact that among orchid growers that transplantation of orchids from one area to another is a critical process. As a general rule, orchids can withstand transplantation after the flowering season and at the beginning of the vegetative growth period. Unfortunately, because of the lack of knowledge in identifying the vegetative morphology of many orchid species, collectors insist on taking them when they are in flower. Many orchid species are therefore lost through such poor collecting methods. Because of our current knowledge of artificial propagation methods, it would seem reasonable to assume that most people could obtain endangered and threatened orchids from growers instead of from the limited numbers that are restricted in their natural areas. Like other endangered and threatened plants, the orchids could be protected in their natural habitats, at least in this country, if Congress, through the law enforcement agencies, designates such habitats as Natural Landmarks and Research Natural Areas.

A preliminary assessment of the distribution of most endangered and threatened plants in this country shows that many of the species already exist on federal and state lands. Since a number of federal agencies such as the Bureau of Land Management, the Fish and Wildlife Service, the Bureau of Outdoor Recreation, the National Park Service, the Forest Service, the Soil Conservation Service, etc., are directly involved in land management, such federal agencies should set a good example by initiating sound conservation policies including a continuous program of mapping, research and protection of endangered habitats and the populations of organisms that live in them.

Among the best methods for cultivating public awareness of the conservation and protection of plants and animals is through wide exposure and publicity of the organisms that need protection. The orchid societies in the United States could be instrumental in pushing forward proposals for the issuance of postage stamps of endangered and threatened orchid species. In addition, coloured illustrations of endangered and threatened orchid species should be displayed on posters (perhaps arranged on a regional basis) in public places, especially national parks, museums, tourist centers, garden clubs, educational institutions and law enforcement offices. The Swiss and the British have used similar methods to bring to the attention of their peoples the need for continuous protection of an important part of their natural heritage.

Many orchid species occur in unique and specialized habitats and therefore require protection if this exceptional plant family is to survive. One of the most valuable lists received during the preparation of the Smithsonian Report came from Dr. Carlyle A. Luer, consisting of a synopsis of the status of preservation of each orchid species in this country. A study of his comments shows that some of the species that are not in imminent danger could easily

be rendered endangered or threatened with the slightest alteration of their natural habitats. In the light of such observation, it is necessary that *all* habitats of the orchid species be given continuous protection. Based on personal knowledge and records of other botanists, the following species were selected for inclusion in this paper and in the Smithsonian Report. I would like to emphasize that these species are by no means the final word on the endangered and threatened orchids of the United States, but the beginning of a serious attempt to identify those species that are in serious danger of extinction.

*Cypripedium arietinum* R. Br. (Ram's-head Lady's-slipper) grows in damp or mossy woods or bogs (Fernald, 1970; Seymour, 1969a,b), cool subacid or neutral soils in dense balsam-cedar-spruce swamps or in nearly pure sand mulched with pine or cedar needles, hillsides in jack-pine forests, exposed areas on north-facing mountain slopes, and low rolling dunes along the Upper Great Lakes (Case, 1964; Gleason & Cronquist, 1963). In Michigan, this species occurs on low dunes in the partial shade of fringing conifers, or under jack-pine and oak, as well as in coniferous swamps (Voss, 1972).

*Cypripedium californicum* Gray (California Lady's-slipper). This species grows on wet rocky ledges and hillsides in mixed evergreen forests (Munz & Keck, 1959).

*Cypripedium candidum* Muhl. ex Willd. (Small White Lady's-slipper, White Lady's-slipper) occurs in calcareous meadows and wet prairies, as well as marshy bogs and low wooded slopes bordering streams and valleys (Fernald, 1970; Voss, 1972; Gleason & Cronquist, 1963; Mohlenbrock, 1970; Steyermark, 1963). Many individual plants may also occur in springy areas among tracts of tamarack (Case, 1964; Deam, 1940).

*Encyclia boothiana* var. *erythronioides* (Small) Luer (Florida Dollar-orchid) is found on trunks of hardwoods, especially those of buttonwood and poisonwood, in swamps and hummocks (Luer, 1972).

*Hexalectris grandiflora* (A. Rich & Galeotti) L. O. Williams (Greenman's Hexalectris) occurs in rich humus of woods in ravines, moist canyons and on stream banks (Correll & Johnston, 1970).

*Hexalectris nitida* L. O. Williams grows among rocks in shaded canyons (Correll & Johnston, 1970).

*Hexalectris revoluta* Correll inhabits moist or dry open oak woods in canyons. (Correll & Johnston, 1970).

*Isotria medeoloides* (Pursh) Ref. (Small Whorled Pogonia, Little Five Leaves, Lesser Five Leaves) occurs in wooded slopes and along streams (Radford et al., 1965). Voss (1972) reported the presence of this species in low secondary woods of red maple in Michigan. Steyermark (1963) has indicated that in Missouri the species grows in acid soil in dry woods.

*Lepanthopsis melanantha* (Reichenb. fil.) Ames is a species that grows on trees in cypress swamps, hummocks and in wet forests (Correll, 1950).

*Listera auriculata* Wiegand (Auricled Twayblade) has been reported to occur on alluvial banks of rivers, calcareous silts, under firs and alders, as well as in arbovitae swamps (Fernald, 1970; Case, 1964; Voss, 1972; Seymour, 1969b; Gleason & Cronquist, 1963).

*Platanthera flava* (L.) Lindley (Pale-green Orchis, Tubercled Orchid, Southern Tubercled Orchid, Rein orchid, Southern Rein-orchid) inhabits swampy, low woods, swales of river-bottom prairies, and flatwoods of swamp white oak (Steyermark, 1963; Luer, 1972; Case, 1964). This species also occurs in sandy alder thickets, tamarack bogs, marshes, and flood plains (Voss, 1972; Deam, 1940; Gleason & Cronquist, 1963).

*Platanthera integra* (Nutt.) Gray ex Beck (Southern Yellow Orchis, Yellow Fringeless-orchid, Yellow Orchid, Golden Frog-arrow). This species is found in savannahs, open acid bogs, and pine barrens on the Coastal Plain, as well as in wet meadows (Fernald, 1970; Radford et al., 1968; Gleason & Cronquist, 1963; Rickett, 1966, Luer, 1972).

*Platanthera leucophaea* (Nutt.) Lindley (Prairie orchis, Prairie White-fringed orchis, White-fringed-orchid, Prairie Fringed-orchid) occurs in open bogs (on floating mats) and wet prairies (Voss, 1972; Gleason & Cronquist, 1963). Steyermark (1963) reported its presence in swales of upland prairies, low moist river bottom prairies, and spring-fed calcareous meadows. In Indiana it is found in tamarack bogs (Deam, 1940).

*Platanthera peramoena* (Gray) Gray (Purple Fringeless-orchis, Pride-of-the-peak, Purple Fret-lip, Purple Fringeless-orchid, Fringeless Purple orchid)



grows in wet meadows, stream banks in brush and wooded cover, wet flat woods of elm and ash (Case, 1964; Steyermark, 1963), as well as in beech, sweetgum and pin oak woods (Deam, 1940).

*Platanthera unalascentis* ssp. *maritima* (Greene) DeFilipps can be found on the sandy soil of slopes, pastures, and bluffs along coasts and terraces facing the Pacific Ocean (Munz & Keck, 1959; Hitchcock et al., 1969).

*Spiranthes lanceolata* var. *paludicola* Luer is reported to occur in deep shade just above the high water levels in humus on logs, stumps or old railroad grades (Luer, 1972).

*Spiranthes parksii* Correll (Navasot Ladies' Tresses) occurs along river banks (Correll & Johnston, 1970).

*Spiranthes polyantha* Reichenb. fl. (Green Ladies' Tresses). This species is found in dry forests among rocks (Luer, 1972).

*Triphora craigheadii* Luer is found on the coast of Florida in humus on decaying logs and stumps (Luer, 1972).

*Triphora latifolia* Luer occurs in rich damp woods, usually under *Azalea* (sic) *serrulata*, maple, and oak with net-vein chain fern and *Burmanna biflora* (Luer, 1972).

In the Smithsonian Report, a recommendation was made concerning the importance of constant monitoring and mapping of all endangered and threatened plants in order to determine their exact locations and to describe in detail their specialized habitats. (Due to the great popularity of orchids with collectors, this information is indicated in general terms on the maps and in the above discussion). It is interesting to note that several orchid species occur in major centers of endemism in this country. For example, there are several concentrations of endemic plants including orchids in California, Oregon, Washington, Florida, Texas, Nevada, Arizona and the Ohio River Valley. To a somewhat limited extent, endemic species are also found in the glaciated areas of the Great Lakes region and the northeastern United States.

In order that we may continue to monitor and update the status of the orchid populations in this country, it is suggested that some standardized format be followed in the collection of basic data (see page 393). Such information could be sent to the Smithsonian to help render the status lists current.

One of the problems encountered in the preparation of the Smithsonian Report was the need for including names of all the plant species. Many plants do not have common names, especially the rare and lesser-known taxa. Some of the species, on the other hand, have names that are obviously confusing since such names apply to two or more unrelated species or genera. In the case of a species with several names, it was difficult to choose one common name without incurring the displeasure of others who know that particular species by another name. Although they eventually were not included in the report, I have attempted to give the known common names of the orchid species selected for this paper. It is strongly suggested that in the near future the American Orchid Society propose standardized common names for all the orchid species of this country.

That orchids present a genuine and inexhaustible delight in the hearts of plant lovers of the world over cannot be denied. Let us help to protect and preserve the undisturbed areas of these beautiful plants in the wild.

I am very grateful for the helpful assistance of Dr. Robert DeFilipps, Mr. Sam Fowler and Ms. Carol Matti-Natella.—*Chairman and Director of Engandered Flora Project, Department of Botany, Smithsonian Institution, Washington, D.C. 20560.*

#### ENDANGERED FLORA PROJECT—SMITHSONIAN INSTITUTION

Name: .....

Family: .....

Original locality: .....

Type of habitat: .....

Maximum known range: .....

Probable present range: .....

Where and when last seen or collected and by whom: .....

Probable present status (underline) increasing, decreasing, stationary, rare, very rare, uncertain, probably extinct.

Remarks (use back if necessary) -----

Report by: -----

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(Submitted by Bruce MacBride)

[From Newsweek of July 14, 1975]

#### FADING FLOWERS

Though the ecologists' battle to prevent the extinction of many species of wild animal has been widely publicized, it is only recently that the experts have come to realize that much of the world's rare plant life is also in danger, and usually from the same enemy—man. According to the International Union for the Conservation of Nature and Natural Resources, as many as 30,000 exotic plants and flowers are already on the brink of extinction around the world. A study by the Smithsonian Institution suggests that perhaps 10 per cent of the 20,000 plants native to the U.S. are also in danger of disappearing for good. Ironically, the list includes the small rock-dwelling plant known popularly as the live-forever.

Botanists who specialize in these studies say that perhaps the most severe depredations are those caused by plant collectors, both commercial and amateur. Cacti like the magenta-flowered beavertail are being ripped wholesale from deserts in the southwestern U.S. for shipment to Europe and Japan—despite the fact that they rarely survive for more than a year after uprooting. Wild stocks of unusual or exceptionally beautiful plants, including the carnivorous Venus flytrap and certain species of orchid, are also being devastated by overzealous nature lovers. The Franklinia, which resembles a magnolia and was named for Benjamin Franklin, was picked to extinction by

1806, just 40 years after its discovery near Georgia's Altamaha River. It survives in cultivation only because a few prescient Englishmen took seeds of the plant to the British horticultural center at Kew Gardens.

There is also another kind of plant collector—the drug pushers. They are scooping up thousands of plants that contain mind-altering chemicals, such as peyote. "Five or six years ago I knew thousands of acres in the lower Rio Grande Valley where peyote grew in profusion," says botanist Del Weniger of Our Lady of the Lake College in San Antonio. "Today, visits to one after another of these previously flourishing locations show them barren of even a surviving specimen."

Many more plant species are threatened with extinction by more subtle means. Lumbering in eastern Texas, for example, has decimated the only known site in the state of the *Stewartia malachodendron*, a shrub with large camelia-like flowers. Goats and cattle introduced into Hawaii are eating a species of the ornamental K'au silversword almost out of existence. In California, wild burros set free by prospectors years ago are devouring the Panamint daisy and other delicate local flowers. Wild rice growing along riverbanks is being poisoned by sewage. Lead from automobile exhausts is thought to be killing off some species of locoweed. Carbon monoxide, mineral fertilizers and herbicides are poisoning plant species by the hundreds, and irrigation schemes, agricultural improvements, road building and housing developments are burying many more.

Genes: The damage being done is not simply esthetic. "The extinction of any species of plant is an irretrievable loss of unique genetic material that cannot be duplicated," says Dale W. Jenkins, former director of the Smithsonian's ecology program. "Imagine the loss to mankind if we had destroyed the cinchona before we discovered quinine's antimalarial qualities," adds the Smithsonian's chief botanist, Edward S. Ayensu, "or if the ancestors of corn, wheat or rice had been wiped out."

The value of plants extends beyond their edibility and medical properties. Many rare species—French's shooting star, for example—protect the soil from erosion in areas like sand dunes, acid bogs, mountaintops and shore lines. Others help to indicate the locations of important minerals, including copper and lead. A number of species of locoweed that are useful in prospecting for uranium are currently on the Smithsonian's endangered list.

Botanists do see some hope for saving some of the plants, as a result of recent government action. A twelve-nation agreement designed to halt export of endangered plants came into force last week—and more countries are expected to sign up soon. The U.S. Department of the Interior is also taking steps to protect the 2,000 American plants on the Smithsonian's list under the terms of the Endangered Species Act—although experts fear that adequate protection may not be available for about five years, when some of the plants will undoubtedly be already extinct.

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(Submitted by Dr. Bruce MacBride)

#### ONE-TENTH OF OUR PLANT SPECIES MAY NOT SURVIVE

The lost *Franklinia* shown above is the first native species of flowering plant of North America known to have become extinct in the wild. This splendid tree was discovered in 1865 on two acres near the Altamaha River in Georgia. It is named *Franklinia altamaha* in honor of Benjamin Franklin. It was exterminated in the wild by 1806 and survives in cultivation only because of the beauty and fragrance of its flowers, for which it was apparently greedily collected. Specimens were taken to England's Kew Gardens and a few were cultivated in gardens in the United States. Three of them now grow in front of the National Museum of Natural History in Washington.

How many species of plants have become extinct in the United States since the arrival of the first settlers? More to the point, how many more are endangered or marked for extinction?

A proposed list of endangered, threatened and recently—or apparently—extinct species of higher plants native to the United States has just been drawn up. It will be published by the Smithsonian Institution in response to the Endangered Species Act of 1973. This act called upon the Secretary of the Institution to review species of plants which are now or may become endangered, to present methods for preserving such species, and to report the results—with recommendations—to Congress in one year.

Of the approximately 20,000 species, subspecies and varieties of native higher plants of the continental United States, at least ten percent warrant concern. About 100 species are recently (within 200 years) extinct or presumed extinct, about 750 endangered, and more than 1,200 threatened. These species are either very rare, with local or limited distributions, are subject to threats, or are heavily depleted by destruction of habitats or by commercial or private collectors.

Hawaii is a special case. Its flora are among the most vulnerable and heavily damaged in the world. Of Hawaii's approximately 2,200 kinds of higher plants, the Smithsonian report lists about 50 percent of them as endangered or recently extinct.

*Endangered* species are those currently in danger of extinction throughout all or a significant portion of their range; *threatened* species are those likely to become endangered within the foreseeable future throughout all or a significant portion of their range; and *recently or possibly extinct* species of plants are those which can no longer be found after repeated search in the locality where they were originally observed, or in other likely places. Some species may be extinct in the wild but preserved in cultivation, as is the lost *Franklinia*.

The Smithsonian lists include the higher plants: angiosperms (flowering plants), gymnosperms (pines and relatives) and pteridophytes (ferns). Lower plant groups will be included later. Only species native or indigenous to the United States (including Alaska and Hawaii) were listed. If a rare species also occurred outside the United States, it was not listed unless its exact status was known. No introduced species were included. Species and well-recognized subspecies and varieties were included, but color forms, known hybrids and horticultural variations were excluded.

Even with all these restrictions and omissions, the number of endangered plants is alarmingly high. Unfortunately, plants are not only taken for granted, but are destroyed without concern. Most of us know that plants are essential to our survival, that we are dependent on their fixing solar energy as carbohydrates in supplying our food, fiber, shelter and fuel. But we often fail to appreciate that the widest possible variety of plants is crucial to our future well-being for many other reasons.

Esthetic appreciation and love of beauty for its own sake are important reasons for preserving rare plants. Natural areas and flowers in our homes make our environment more livable and beautiful. But some of the most prized plants are also the most rare, and many rare species are too beautiful for their own good, especially orchids, cacti, lilies, heaths and primroses. Some medicinal plants such as ginseng and goldenseal have been seriously depleted by over-collecting. Unique or bizarre plants such as the carnivorous Venus's-fly-trap and pitcher plants are commercially exploited.

Every species or variety of plant has a unique type of germ plasm, or gene pool, with its own genetically coded characteristics and values. When a plant species is extinguished, the gene pool cannot be duplicated or reestablished and is lost forever. Each kind that we destroy narrows our options. Imagine the loss to mankind if we had destroyed the cinchona before discovering quinine's antimalarial qualities. It is estimated that 50,000 new chemical compounds can be discovered in plants, including some with important medical uses. Plants produce biologically active chemicals, including safe insecticides, and provide us with the chemical structures to synthesize others.

Food production has become a major world problem. The species of food plants now being grown and marketed are the results of long years of selection. Each species represents a unique genotype, and to lose some of the genetic variability could be disastrous. We need to conserve the progenitors of our present food crops (see p. 59) for use in hybridizing and crossbreeding, preserving original values, and developing disease- and pest-resistant strains. Some of the ancestors of corn, for example, are very rare; some are apparently extinct.

If we are to use presently uncultivated lands to supplement the world's food supply, or adapt crops to changing climates, new types and varieties of plants will have to be developed. We do not know which rare species may have value for food production.

The numerous habitats and ecosystems of the world require a wide diversity of plant species. This diversity is essential to maintain ecological stability and

to prevent wind and water erosion, develop soil and retain water. Many of our rare and threatened species are especially valuable since they are able to grow in difficult habitats, such as cedar and shale barrens, islands, sand dunes, ocean and estuary shorelines, rock faces, mountaintops, bogs and other unstable areas. They should not be lost.

Throughout the course of the evolution of life on Earth, some species have disappeared, while others have adapted or developed into new forms. Those destroyed by the rising and sinking of the Earth's crust, flooding and severe climatic changes have been slowly replaced by new species adapted to the new environment. But enter Man, with his technology, growing population and general ignorance, and the natural tempo is speeded up like a time-lapse film of a sunset. There is no time for adaptation or replacement.

Habitat destruction is only one problem. Overgrazing by domestic animals, use of fertilizers and herbicides, introduction of foreign plants without their natural controls, and destruction of insect, bird and bat pollinators all can endanger plants. Locally introduced foreign diseases, insects, birds or other organisms may spread over the entire continent.

Plant populations are directly destroyed by the collection of entire plants, their seeds, fruits or flowers. Collectors or rarities persist in causing serious damage to critical species, despite the high frequency of unsuccessful transplants.

Now that we know how many species of plants are in trouble, what can we do to save them? Most important is preservation of their habitats. It is also important to control commercial exploitation. The public must be alerted to the damage done by transplanting rarities and picking their flowers. We need to study certain species to determine their requirements and to monitor their populations. Some, for example, may require periodic fire.

A promising approach to habitat preservation is mapping of all species to determine aggregations or centers of endangered ones.

In the United States there are several areas with concentrations of species known only in those regions. The major centers are in Florida, the southern Appalachian Mountains, Texas and California. Locating endemic centers and aggregations of species enables us to set priorities for preserving their habitats. Land acquisition by federal, state and local government and by private groups, designation of natural landmarks and conservation easements are all ways to do it. Endangered plants should be given a high priority in evaluating environmental impact statements.

Commercial exploitation must be controlled. Nearly a third of the native cacti are on the endangered, threatened or extinct list. Yet cacti are commercially collected by the truckload, with most pressure on the rarest species which command the highest prices. Some species of cactus and other succulents are so rare that they could be made extinct in minutes. Commercial suppliers should be subject to stiff penalties for collecting threatened species from the wild. Rather, they should be encouraged to grow them directly from seed.

The craze for rarities should be discouraged. The owner of an extremely rare and endangered plant dug from the wild should be made to feel the same social disapproval that owners of leopard coats now receive.

Digging rare plants to transfer them to a garden, even a professionally run botanic garden, is not the answer. Breaking the roots of some species causes infection and death. Many rare plants have highly specialized requirements which are frequently unknown. Even if transplanting is successful, the future, especially the reproductive future, of the plant is uncertain. Plant collections are often lost with the death of the owner. Even the best botanic gardens' rare species are exposed to hybridizing with related species, and records may be lost over long periods of time. Artificial cultivation should be considered only as a last resort if an unavoidable threat endangers the species, and only with the ultimate objective of reestablishment in its original or a similar habitat.

It is incumbent on Man, as the dominant species, and the only species which has some control over not only its own future but the future of life around it, to interact wisely with his natural environment. The irony of the present situation is that Man, for the most part, is destroying those species which can give the best insight into evolutionary development. There are several thousand species which have adapted to unusual environmental conditions. What genetic quirks have they developed that nothing else has? With the answers to that question, Man might repair some of the damage already done, and be more effective in assuring future ecological stability.

(Submitted by Dr. Bruce MacBride)

## OUR RARE AND ENDANGERED TREES

(By Elbert L. Little, Jr.)

Interest in rare and endangered plants has increased greatly during recent years. An inventory is needed so that these species can be located, protected, and saved from extinction.

The Endangered Species Act of 1973 (Public Law 93-205) directed the Smithsonian Institution to prepare a list of endangered and threatened plant species, to review methods of adequately conserving these species, and to report the Institution's recommendations to the Congress.

On December 15, 1974, this task was accomplished. In a 200 page report, the Secretary of the Smithsonian Institution, S. Dillon Ripley, presented to the Congress lists of extinct, endangered, threatened, and commercially exploited species of native plants of the United States. In the continental United States, this list comprises about 10 percent of the flora—2,099 species (including some varieties and subspecies).

However, the Act also provided that the Secretary of the U.S. Department of the Interior must study the Smithsonian Institution's preliminary list of species to determine whether or not the species listed are truly threatened or endangered. At this time, no species has been so classified by the Secretary of the Interior. And until this happens, there is no official list of approved threatened or endangered species—only preliminary or proposed lists are available.

Of the more than 2,000 species of endangered and threatened plants of the continental United States, only about 40 are trees. (See list accompanying this article.)

Only two tree species of continental United States are classed as extinct, or not found in recent years after careful search. Fortunately, one of these survives in cultivation, and the other possibly might be located later.

*Franklinia* (*Franklinia alatamaha*) is the symbol of the endangered plant program. This large shrub or small tree was collected at a single locality near Fort Barrington on the Altamaha River, McIntosh County, near sea level in the coastal plain of southeastern Georgia. Discovered in 1765 by John and William Bartram and named in 1785 for Benjamin Franklin (1706-90), it has not been seen in the wild since the turn of the 18th century. The original colony probably was exterminated by transplanting to cultivation and thus by good luck was saved from destruction. This showy ornamental of the tea family is widely planted for its large white flowers and is extinct only in nature.

Ashe birch (*Betula uber*), a small tree with blackish aromatic bark, was discovered in 1914 in the Southern Appalachians in Smyth County, southwestern Virginia, by William Willard Ashe (1872-1932). That forester of the USDA Forest Service, a keen observer and an authority on southeastern woody plants, named it in 1918. There was a second obscure botanical collection about the same time. This birch has not been found in later searches and is listed as probably extinct. Much forested mountainous land in that county now is managed within the Jefferson National Forest and awaits exploration.

To the Smithsonian list of endangered and threatened trees, I would like to add another category—rare trees. Rare trees are native trees which, although sometimes common and well-known in their own area, have an extremely limited geographical distribution often being confined to a few counties within a single state. I estimate that there are as many as 100 such native tree species that are in as great need of protection as those on the Smithsonian List. In this connection, I would like to point out that at least ten of the tree species on the Smithsonian List are in National Forests where they are already receiving protection.

## RARE, ENDANGERED, AND THREATENED TREES

In the discussion that follows, rare, endangered, and threatened species are divided into conifers (softwoods) and hardwoods. Because they are the more numerous, hardwood species are further subdivided geographically.

## CONIFERS

The rocky cliff along the east bank of Apalachicola River in northwestern Florida is the main locality for two well-known, very rare and endangered

conifers, Florida torreyia (*Torreya taxifolia*) and Florida yew (*Taxus floridana*). These members of the yew family (Taxaceae) bear seeds singly, not in cones as do most native conifers. Several generations of field botanists, beginning with Asa Gray, have made pilgrimages to the site, at first by steamboat up the river. Now, a highway leads from Bristol about ten miles north to Torreya State Park, which offers protection. Nevertheless, Florida torreyia is almost extinct in its natural habitat, having been killed by a fungal disease of the stems. Trees survive in parks and gardens. The National Arboretum of the U.S. Department of Agriculture at Washington, D.C., has small plants of both species, apparently hardy there, and has distributed seeds to botanical gardens.

Cypresses (genus *Cupressus*) are the rarest group of native conifers, confined to five southwestern and western States from Texas (Chisos Mountains) to southwestern Oregon. This ancient genus, which had wider distribution in the fossil record, is represented now by many scattered or isolated groves, actually few enough to be counted. Seven species with five additional varieties (treated by some botanists as 12 species) are distinguished, mostly within California. Some groves of nearly all kinds are protected within National Forests and Parks or other preserves. Only three are classed as endangered.

Fortunately, cypresses are adapted to survive forest fires. After persisting tightly closed on the trees several years, the cones open in the heat of the flame, which kills the trees. Then the seeds fall, germinate on the exposed soil, and produce thickets of another generation.

Cuyamaca cyprss (*Cupressus arizonica* var. *stephensonii*), rarest of the named kinds, is classed as threatened. It has been known from a single grove in Cuyamaca Mountains, San Diego County, southern California. This stand less than one mile long is partly within the Cleveland National Forest and partly within Cuyamaca Rancho State Park and thus is doubly protected. Recently a second locality has been discovered across the border in Baja California, Mexico.

Santa Cruz cypress (*Cupressus governiana* var. *abramsiana*) is very rare, endangered, and confined to four localities in Santa Cruz Mountains near the coast in central California in Santa Cruz and San Mateo Counties. Much of the Butano Ridge Grove is owned by the second county.

Piute cypress (*Cupressus arizonica* var. *nevadensis*), classed as threatened, is restricted to nine or possibly more groves in Piute Mountains and vicinity, Kern and Tulare Counties, south central California. Preserved in Piute Cypress Botanical Area within the Bakersfield District of the Bureau of Land Management and the Sequoia National Forest. The Bodfish Botanical Area on this National Forest gives additional protection.

California can boast of other noteworthy conifers, several too common and widespread for listing here. Torrey pine (*Pinus torreyana*) is one of the rarest of the 3 pine species native in the United States. It grows only on the Pacific Coast at north edge of San Diego near Del Mar in San Diego County, also on Santa Rosa Island. Most of the mainland grove of about 1,092 acres containing more than 7,000 trees is preserved within the recently enlarged Torrey Pines State Park. This distinctive species bordering a city could become endangered by air pollution and should be propagated elsewhere.

Monterey cypress (*Cupressus macrocarpa*) is a very rare, threatened native conifer confined to two groves of windswept trees at Point Lobos and Point Cypress near Monterey and Carmel along the Pacific Coast in Monterey County, central California. The first area is protected within Point Lobos Reserve and the second within Del Monte Forest. The trees are commonly cultivated over Monterey Peninsula. However, planting in California is no longer recommended because of high susceptibility to the cypress canker disease. This species is widely grown in other parts of the world for ornament and timber.

Bristlecone fir (*Abies bracteata*), also called Santa Lucia fir, is the most restricted of all firs, classed as rare though not endangered. Its entire natural range is within a strip about 60 miles long and 13 miles wide confined to Santa Lucia Mountains within the Monterey Ranger District, Los Padres National Forest, Monterey County and extreme northwestern San Luis Obispo County, California. Many of the northern stands are within Ventana Wilderness Area. This unique fir, so different from the other 38 species of true firs of the world, has been placed in a separate subgenus. It merits wider propagation in mild climates as a handsome ornamental.



Brewer spruce (*Picea breweriana*), rarest of the native spruces, is confined to two counties of southwestern Oregon and five in northwestern California. Its range centers in the Siskiyou Mountains, noted for several local or endemic plants, and is mostly within five National Forests. A natural area of the Bureau of Land Management saves more groves.

Other plant species of Mexico have advanced north of the international boundary a short distance into the southern portions of New Mexico, Arizona, and California. Classed as border or peripheral species, they are rare or local but technically not endangered. A conifer example is Parry pinyon (*Pinus quadrifolia*) of northern Baja California, which is rare in mountains of southern California, mostly within San Bernardino and Cleveland National Forests.

Many coniferous tree species of the Cordillera Occidental of northwestern Mexico extend northward into the mountainous divisions of the Coronado National Forest in southeastern Arizona and the southwestern corner of New Mexico. Examples are: Mexican pinyon (*Pinus cembroides*), Chihuahua pine (*Pinus leiophylla* var. *chihuahuana*), and Apache pine (*Pinus engelmannii*).

#### EASTERN HARDWOODS

Several species of rare hardwoods are scattered through forests of eastern United States, partly protected within National Forests. Threatened examples are Allegheny plum (*Prunus alleghaniensis*) of the Appalachian Mountains in Pennsylvania and nearby States and Georgia oak (*Quercus georgiana*) and Oglethorpe oak (*Quercus oglethorpensis*) both in the Piedmont of Georgia and adjacent States.

Corkwood (*Leitneria floridana*) is rare and local though not endangered in wet soils over the coastal plain of 17 counties in five southeastern States from Florida to Missouri. This small tree with exceedingly lightweight wood is so distinct from all other plants that it is placed in its own botanical family!

Ozark chinkapin (*Castanea ozarkensis*) is perhaps the only tree species limited or endemic to the Ozark Mountain region of Arkansas and edges of Missouri and Oklahoma. Not rare, it is classed as endangered because of its susceptibility to the chestnut blight disease.

One center of local or endemic species is the sand hills area of central Florida with scrub vegetation of evergreen oaks and sand pine. Tree species growing within Ocala National Forest include: yellow anisetree (*Illicium parviflorum*), known from only five counties and classed as threatened; Florida willow (*Salix floridana*), a rare and endangered species apparently on the verge of extinction; and scrub hickory (*Carya floridana*), local though not rare.

Finally, seaside alder (*Alnus maritima*) has one of the oddest distribution patterns of all native tree species. As the names indicate, this threatened species is local though not rare in five counties of Maryland's Eastern Shore and one in southern Delaware. About a century ago it was discovered far inland in a second area, rare along a stream in two counties of south central Oklahoma, more than 1.150 miles to the southwest! Groves of the Oklahoma trees are protected within Devils Den Park, preserved for its granite outcrops. No other tree species confined wholly within the contiguous United States has a greater distance between its disjunct areas. (A few species reappear also in other countries, for example, southward in mountains of Mexico.) No explanation has been offered for this accident or mystery of plant migration.

#### SOUTH FLORIDA HARDWOODS

The greatest collection of rare native trees anywhere in continental United States is in South Florida, according to the author's compilation soon to be published. About 105 tropical species are limited mostly to the southern fourth of the State and grow wild nowhere else in the country. More than 50 of these are confined to the three southernmost counties (Dade, Monroe, and Collier), 13 to the Florida Keys. Obviously, many are rare. By luck, all are border or peripheral species present in greater numbers through various islands of the West Indies or even beyond. Many are native also in Puerto Rico and the U.S. Virgin Islands.

These tropical trees are not listed as threatened with extinction in a technical sense, as defined by the Endangered Species Act. Nevertheless, protection is fully justified. Small natural groves must be preserved now for study and enjoyment by present and future generations. It certainly would be tragic, if

later residents should need to visit a foreign country to find species that have disappeared here. A few of the rarest deserve mention.

Simpson stopper (*Myrcianthes fragrans* var. *simpsonii*) is a threatened tree endemic to South Florida. It is limited to the mainland in Dade County (including Everglades National Park), and to the Upper Keys. The related typical variety has a wider range within the State and in tropical America.

Florida royalpalm (*Roystonea elata*) is the only palm on the endangered list. The nation's tallest palm reaches 80 feet or more in height. These handsome trees are common in cultivation, lining streets in South Florida. They are rare in hammocks and formerly grew wild north to the central part of the State. Groves are protected within Everglades National Park to the Cape Sable region and in Big Cypress, including Collier-Seminole State Park. The same or a closely related species is also in Cuba.

Florida cherryplam (*Pseudophoenix sargentii*) is the scarcest native palm of Florida, nearly disappeared except in cultivation. On Elliott Key within Biscayne National Monument, 28 plants were found in 1958. Also three trees and many stumps were left on another of the Upper Keys where several hundred were discovered in 1886. Fortunately, this species is a cultivated ornamental. It grows wild in the West Indies, so does not qualify for listing.

Yellowheart or stainwood (*Zanthoxylum flavum*) now is known only from very few wild trees within Bahia Honda State Park in the Lower Keys. In 1840 it was common at Key West. The trees probably were cut for the beautiful yellowish wood, prized for cabinetmaking, fine furniture, veneer, and inlaid work. Also distributed through the West Indies and planted for shade, it was one of Puerto Rico's most valuable timbers but is now scarce there.

Lignumvitae (*Guaiaacum sanctum*) is rare on the Lower Keys but preserved in the State Park on Lignum Vitae Key, named for this tree. Reported as abundant at Key West in 1840, the precious self-lubricating wood was sold by weight for bearings, pulleys, mallets, and turned novelties. Planted in southern Florida as a handsome blue-flowered ornamental with dark green foliage. Native through the West Indies, including Puerto Rico, also in Mexico and Central America.

Gulf licaria (*Licaria triandra*) persists as a few wild trees within the city of Miami in Simpson Park (one city block) and left around homes after clearing of Brickell Hammock, the only Florida locality. The first two trees were discovered in 1910, but about 25 were known in 1946. Also in West Indies.

#### TEXAS HARDWOODS

The big State of Texas has several species of rare native trees, as well as border or peripheral species that extend northward from Mexico across the international boundary. A few rare plants are confined to the Edwards Plateau, an ancient land mass of limestone canyons in central Texas. Uvalde bigtooth maple (*Acer grandidentatum* var. *sinuosum*) is a threatened local variety.

Other rare plants can be seen in the Chisos Mountains within the Big Bend National Park of Trans-Pecos Texas. Chisos oak (*Quercus granciliformis*) is classed as endangered. Big Bend hophornbeam (*Ostrya chisosensis*), named as late as 1965 and not known elsewhere, is threatened.

Several species of subtropical trees from Mexico have their northernmost representation in the lower Rio Grande valley or slightly beyond. Ebony blackbead (*Pithecellobium flexicaule*), locally called Texas ebony, is one. The black, very hard heartwood resembles that of unrelated true ebony from Africa and is made into novelties. Mexican palmetto (*Sabal mexicana*) of Mexico and Guatemala is another. The Texas palms until recently were treated as a separate species.

An *esenbeckia* was named as a new species in 1930 from only four trees discovered near Brownsville the year before. The trees apparently were destroyed in land clearing, though a few were planted around houses. This species was saved from extinction in an odd way, reduction by Texas botanists to a species (*Esenbeckia berlandieri*) named about a century ago and scattered through five or more States of northern Mexico.

#### MEXICAN BORDER HARDWOODS

Several tree species of the Cordillera Occidental of northwestern Mexico extend northward into the mountainous divisions of the Coronado National Forest in southeastern Arizona and the southwestern corner of New Mexico. Examples are: netleaf oak (*Quercus rugosa*), Mexican blue oak (*Quercus oblon-*

*gifolia*), silverleaf oak (*Quercus hypoleucoides*), and Airzona madrone (*Arbutus arizonica*).

"A hidden botanical garden" is the description applied to one rocky canyon that runs a few miles north of the border into the Colorado National Forest. Designated afterwards as the Goodding Research Natural Area, it honors Leslie N. Goodding (1880-1967), late botanist of the U.S. Department of Agriculture. There he discovered the northernmost plants of several Mexican species. One of the scarcest, Goodding ash (*Fragmus gooddingii*) named in 1952, commemorates his find. He showed that small tree to the writer on a special trip. It is classed as endangered and has turned up also in mountains of northern Sonora.

#### CALIFORNIA ISLANDS HARDWOODS

The greatest numbers of rare and endangered plants are to be sought in islands, even though relatively few species are present. Under isolation from the continents, different and often strange forms have developed.

The Channel Islands off the Pacific Coast of southern California have several endemic plant species absent from the nearby mainland. Santa Catalina is the best known of the eight small islands. Examples of the endemic small trees are these four species (also four varieties): island live oak (*Quercus tomentella*), rarest of the California oaks and threatened; Catalina cercocarpus (*Cecocarpus traskiae*), endangered, and very rare, confined to one canyon; Lyontree (*Lyonothamnus floribundus*) endangered; and Catalina cherry (*Prunus lyonii*).

#### HAWAII

Space does not permit me a detailed discussion of Hawaii's trees. Hawaii has more rare and endangered tree species than any other state. Indeed, the 50th State has more native endemic trees on its separate list of endangered species than all the other 49 combined.

More than nine-tenths of Hawaii's native plant species are local or endemic and grow wild only inside that archipelago. Of the 250 native tree species, about 225 are not found elsewhere. About one-half of these tree species are restricted to only one of the eight islands. Many of these generally small trees have an extremely narrow range of only a few square miles. Some are known from a single locality, such as a valley or mountain. More than 50 tree species confined to a single island (possibly nearly twice as many), also several from two or more islands, are classed as endangered or threatened. Regrettably, a few have already become extinct since their discovery by botanists within the past century.

Preservation of the natural vegetation around these numerous scattered and isolated endemics in Hawaii is difficult and involves many areas. Also, protection from introduced grazing animals, domestic and game, is necessary. Fortunately, some rare species are within Hawaii Volcanoes National Park, Haleakala National Park, and the large State forest preserves. (Hawaii has no National Forests, though the USDA Forest Service conducts forestry research at the Institute of Pacific Islands Forestry with headquarters in Honolulu.) Perhaps some endangered plants could be saved by propagation at the U.S. National Tropical Botanical Garden on the island of Kauai and similar areas.

#### PUERTO RICO AND THE VIRGIN ISLANDS

The greatest per acre concentration anywhere under the United States flag of rare and endemic tree species (62) is within the Caribbean National Forest in the Commonwealth of Puerto Rico. The trees of Puerto Rico and the Virgin Islands (both United States and British) are described and illustrated in a recently completed 2-volume reference by the USDA Forest Service. Endemic, rare, and endangered trees are listed in the second volume and will by the subject of another publication in the series on rare trees.

##### For Further Reading:

"Alaska Trees and Shrubs" by Leslie A. Viereck and Elbert L. Little, Jr. U.S. Dep. Agric., Agriculture Handbook No. 410, 265 p., illus. 1972 For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price \$6.00.

"Rare and Local Conifers in the United States" by Elbert L. Little, Jr. U.S. Dep. Agric. Conservation Research Report No. 19, 25 p., illus. Jan. 1975. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 75 cents.

"Native Trees of Hawaii" by Elbert L. Little, Jr. American Forests, Feb. 1969. "Trees of Hawaii" by Stanley M. Jepsen, American Forests, Dec. 1967. Both reprinted as Chapter 22 in "Enjoying Our Trees," edited by Charles Edgar Randall, The American Forestry Association, Washington, D.C. 1969.

"Common Trees of Puerto Rico and the Virgin Islands" by Elbert Little, Jr., and Frank H. Wadsworth, U.S. Dep. Agric., Agriculture Handbook No. 249, 548 p., illus. 1964. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price \$8.50.

"Trees of Puerto Rico and the Virgin Islands, Second Volume" by Elbert L. Little, Jr., Roy O. Woodbury, and Frank H. Wadsworth. U.S. Dep. Agric., Agriculture Handbook No. 249, 1,024 p., illus. 1974. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. Price \$13.45.

#### TREE SPECIES LISTED IN THE SMITHSONIAN REPORT ON ENDANGERED AND THREATENED PLANT SPECIES

##### EXTINCT (2 SPECIES)

Ashe birch (*Betula uber*), birch family, Smyth County, southwestern Virginia, probably extinct

Franklinia (*Franklinia alatamaha*), tea family, McIntosh County, Southeastern Georgia, extinct except in cultivation

##### ENDANGERED (15 SPECIES, 3 VARIETIES)

Deering tree-cactus (*Cercus robinii* var. *deeringii*), cactus family, Upper Florida Keys, privately collected (Also commercially exported.)<sup>1</sup>

Robin tree-cactus (*Cercus robinii* var. *robinii*), cactus family, Lower Florida Keys, also Cuba, privately collected. (Also commercially exported.)

Kearney sumac (*Rus kearneyi*), cashew family, southwestern Arizona, also Baja California, Mexico

Florida royalpalm, (*Roystonea elata*), palm family, southern Florida, also Cuba  
Santa Cruz cypress (*Cupressus goveniana* var. *abramsiana*), Santa Cruz Mountains, Santa Cruz and San Mateo Counties, central California

Elliottia (*Elliottia racemosa*), heath family, eastern Georgia

Ozark chinkapin (*Castanea ozarkensis*), beech family, Ozark and Ouachita Mountains, Missouri, Arkansas, and Oklahoma

Chisos oak (*Quercus graciliformis*), beech family, Chisos Mountains, Brewster County, Trans-Pecos Texas

Oak (*Quercus tardifolia*), beech family, Chisos Mountains, Brewster County, Trans-Pecos Texas

Hinds walnut (*Juglans hindsii*), walnut family, central California

Goodding ash (*Fraxinus gooddingii*), olive family, Santa Cruz County, southern Arizona, and northeastern Sonora, Mexico

Catalina cercocarpus (*Cercocarpus traskiae*), rose family, Santa Catalina Islands off southern California

Lyon tree (*Lyonothamnus floribundus*), rose family, California islands off southern California

Hinckley cottonwood (*Populus hinckleyana*), willow family, mountains of Trans-Pecos Texas

Florida willow (*Salix floridana*), willow family, southern Georgia to central Florida

Mexican premontia (*Fremontodendron mexicanum*), sterculia family, southern California and northern Baja California, Mexico

Florida yew (*Taxus floridana*), yew family, northwestern Florida

Florida torreyia (*Torreya taxifolia*), yew family, northwestern Florida and southwestern Georgia

<sup>1</sup> Commercially Exploited Trees

A special list in the report contains the commercially exploited species, mostly cacti and other succulents. These are endangered and threatened because wild plants are collected by dealers and commercially exploited or privately collected by individuals for their own gardens. In the Florida Keys, one species endangered by collectors is a tree-cactus with trunk and several erect columnar branches to 15-20 feet high. One variety (*Cereus robinii* var. *robinii*) is rare from Key West to Big Pine Key, also in Cuba. A second variety (var. *deeringii*) is known only from a few of the Upper Keys.

## THREATENED (13 SPECIES, 9 VARIETIES)

- Uvalde bigtooth maple (*Acer grandidentatum* var. *sinuosum*), maple family, Edwards Plateau, central Texas
- Dune holly (*Ilex opaca* var. *arvicola*), holly family, northern and central Florida
- Seaside alder (*Alnus maritima*), birch family, Delaware, eastern Maryland, and southern Oklahoma
- Chisos hophornbeam (*Ostrya chisosensis*), birch family, Chisos Mountains, Trans-Pecos Texas
- Piute cypress (*Cupressus arizonica* var. *nevadensis*), cypress family, Piute Mountains and vicinity, Kern and Tulare Counties, south central California
- Cuyamaca cypress (*Cupressus arizonica* var. *stephensonii*), cypress family, Cuyamaca Mountains, San Diego County, southern California
- Monterey cypress (*Cupressus macrocarpa*), cypress family, Monterey County, central California
- Georgia oak (*Quercus georgiana*), beech family, northern Georgia
- Oglethorpe oak (*Quercus oglethorpensis*), beech family, western South Carolina and northeastern Georgia
- Mapleleaf oak (*Quercus shumardii* var. *acerifolia*), beech family, Arkansas
- Island live oak (*Quercus tomentella*), beech family, California islands off coast of southern California, also Guadalupe Island off Baja California, Mexico
- Yellow anise-tree (*Illicium parviflorum*), magnolia or anise-tree family, eastern Florida
- Silkbay (*Persea borbonia* var. *humilis*), laurel family, central Florida
- Ashe magnolia (*Magnolia ashei*), magnolia family, northwestern Florida
- Simpson stopper (*Myrcianthes frangrans* var. *simpsonii*), Dade County, southern Florida
- Lowell ash (*Fraxinus anomala* var. *Lowellii*), olive family, northern and central Arizona
- Fragrant ash (*Fraxinus cuspidata* var. *macropetala*), olive family, northern and central Arizona
- Feltleaf ceanothus (*Ceanothus arboreus*), buckthorn family, California islands off southern California
- Allegheny plum (*Prunus alleghaniensis*), rose family, Pennsylvania to West Virginia and Connecticut
- Few-flowered vauquelinia (*Vauquelinia pauciflora*), rose family, southeastern Arizona and apparently northern Mexico
- Pinckneya (*Pinckneya pubens*), madder family, southern South Carolina to Georgia and northwestern Florida
- River willows (*Salix fluviatilis*), willow family, southwestern Washington and northeastern Oregon

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[From American Forestry, April 1975]

(Submitted by Dr. Bruce MacBride)

## ENDANGERED PLANTS

(By Dickson J. Preston)

Should endangered species of plants have the same protection by law that endangered animals, birds and fish have now?

Congress has said so, in a little-noticed section of the Endangered Species Act of 1973. And the Smithsonian Institution, in response to the act, has proposed a far-reaching program of legal protection in a report which warns that more than 10 percent of all native American plant species face the threat of extinction soon unless prompt steps are taken to save them.

The report has special significance for persons concerned with forestry because it marks the first attempt ever made to assess the status of plant life on a national scale and to suggest methods of conserving it. It is thus a landmark study which is certain to spark discussion and controversy for years to come.

Some of its recommendations will rouse vigorous debate among botanists, government agencies, commercial garden suppliers and forestry experts. The report urges protection of entire areas of habitat, rather than propagation under artificial conditions, as the only "practical" method of keeping endangered species alive. This is a key plank in its program, and a controversial

one. Some objectors believe it would result in setting aside valuable timber land "for the sake of a few wildflowers."

It calls for an immediate crackdown on all commercial dealings in endangered or threatened plants, and a flat ban on collecting them for private gardens and herbaria. This will produce howls of outrage from dealers who do a rich business in peddling rare cacti, orchids and other plants, and from collectors who boast of the rarities in their gardens.

And, despite its polite language, the report makes clear that its authors do not believe federal agencies—especially the Department of Interior—are doing a proper job of enforcing the plant protection laws already on the books. It prods them to get going in implementing their present powers—an attitude sure to bring angry retorts from the bureaucracies.

Heart of the report is a list of 2,099 species, subspecies and varieties of plants found in the continental United States and Alaska which are classified as endangered, threatened or recently extinct. This amounts to 10.4 percent of the estimated U.S. total of 20,000 kinds of indigenous higher plants. (Lower plant forms such as fungi or lichens, and imported species, are not included.)

An accompanying list places 1,088 of the 2,200 native Hawaiian plants in the same three categories—an alarming 48.9 percent of the total.

These lists are in themselves monumental works which explore entirely new ground. Nothing like them has ever been undertaken on a national scale. Prepared by Drs. Dale Jenkins, Edward S. Ayensu and Robert DeFilippis of the Smithsonian with the help of leading botanical taxonomists from throughout the country, they attempt to put into focus for the first time the entire range of problems facing American plant life as a result of environmental depredations by modern man.

The compilers do not present them as final or complete in any sense. Rather, the report says, they provide merely a "snapshot" of the problem, and many species will be added or deleted as new information comes in. But they are valuable as guidelines to the actions needed if many more plants are not to join the 100 U.S. Species and the 255 in Hawaii which have vanished forever in recent years.

Actions recommended in the report would in effect recognize wild plant life as a basic natural resource of immense value to be protected in the same way as rivers, lakes, seashores, coal and oil reserves and other natural resources. Specific recommendations include these:

Authority for the Secretary of Interior to acquire land for the purpose of protecting endangered and threatened species of plants. He now has this authority in the case of birds, animals, fish, and some—but by no means all—of the plant species on the Smithsonian lists.

Inclusion of consideration for endangered and threatened plants in all environmental impact and land use studies, whether by federal or state and local agencies.

Increased attention to plant protection by the federal Council on Environmental Quality (CEQ) and by federal agencies involved in land management, including the Bureau of Land Management, the Fish & Wildlife Service, the Bureau of Outdoor Recreation, the National Park Service, the Forest Service, the Soil Conservation Service, the Atomic Energy Commission and the Department of Defense.

Immediate steps to prohibit both commercial exploitation and private collection of endangered or threatened species. This is urgent because, as the report concedes, mere publication of the lists is going to send dealers and collectors rushing into the field to grab up rarities while they can.

Enforcement by federal agencies of powers they already have, under an international trade convention signed in March 1973, to prohibit trade in wild cacti, orchids and ginseng. Under the Endangered Species Law, stiff civil and criminal penalties are provided for violations. But no efforts have been made to enforce the prohibitions, and dealers gather up rare species by the truckload for sale to garden enthusiasts, with the most attention being paid to the rarest species because they command the best prices.

Coupled with this is a request that the Secretary of Interior promptly publish the lists, or a revised version of them, in the Federal Register and take steps to include them in the 1973 trade convention. These technical actions, says the report, would effectively halt commercial exploitation under present law.

Large scale mapping of species on the lists and creation of a permanent registry office to keep track of changes in status, population, range and other

data on endangered and threatened plants. The mapping is already under way at the Smithsonian. Its purpose is to determine which species are on lands already under federal or state protection and which are concentrated in narrow habitat areas which could easily be acquired.

A broad educational program to alert the public to the extent of the problem and to which plants should not be disturbed. This would include full-color displays at parks, nature reserves, museums and tourist centers, educational materials provided to schools and colleges, information programs through botanical, gardening and conservation groups, and perhaps a series of postage stamps.

Some new legislation. Although the report says none is needed "at this time," it goes on to point out flaws in the 1973 Endangered Species Act which need correction.

One suggested change would give the Secretary of Interior clear authority to acquire land for protection of all plants on the endangered or threatened lists. Another would bar the taking of such plants by "well meaning but misguided" private collectors who often kill the rarities when they try to transplant them. The law is also faulty, the report says, because it covers only species and subspecies, and does not include varieties—a much more important classification in plants than in animals and birds.

Of major interest to AMERICAN FORESTS readers, of course, are two questions: How many trees are involved? And, to what extent would the Smithsonian program affect forestry?

To those can be added a third, often raised in public discussions: Why bother with all this anyhow? What is the point of so much effort to save a few rare and obscure species of plants of no known value to man?

The short answer to the first question is: Not many. And to the second: Potentially, a great deal. As for the third, the report's authors offer some persuasive answers which will be dealt with later in this article.

Only about 40 kinds of trees are on the endangered and threatened lists for the United States and Alaska, out of more than 1,100 species recognized by the Department of Agriculture. And few or none of these are of commercial importance, according to Elbert S. Little, Jr., chief dendrologist for the USDA. They are of interest to forestry people, however, because of their rarity.

Included are several species of oaks; five species or varieties of cypress, chiefly in California; the rare *Magnolia ashei* of Florida and the Harvard plum of Texas; three kinds of Arizona ash; four Texas hawthorns; two willows (*Salix floridana* and *Salix fluviatilis*); and the extremely rare Florida torreya, both confined mostly to a narrow range on the Apalachicola River in northwest Florida.

Most famous tree is the "lost Franklinia," first known native American plant to become extinct in the wild and also a sad example of predation by collectors. This tree was discovered in 1765 near the Altamaha River in Georgia, and named in honor of Benjamin Franklin. It was greedily collected for its beautiful and fragrant flowers, and by 1806 had vanished as a wild plant. Specimens were taken to England's Kew Gardens and a few were cultivated in the U.S. Some are still around—in fact, three *Franklinias* are growing in front of Smithsonian's Museum of Natural History Building in Washington, D.C. So it continues to exist as a species—but rather like the almost extinct white tigers which are living out their lives in cages in the Washington zoo.

Little contends that few trees on the list are actually in danger because most of them are located on lands already protected by federal or state agencies.

The ranges of the Florida yew and torreya, for instance, are at least partly in a Florida state park. The Cuyamaca cypress (var. *stephensonii*), an Arizona tree listed as endangered, is found in both a national forest and a state park. The Monterey cypress (*Cupressus macrocarpa*) is limited as a wild native tree to two groves at Point Lobos and Point Cypress, both within protected areas. But it is also widely distributed as a cultivated tree throughout the Monterey Peninsula and in other parts of the world.

Of more concern to forestry interests than endangered tree species is the possibility that valuable timber stands might be set aside, with cutting forbidden, if they happen to contain an endangered plant species, even though it is not a tree. This stems from the recommendation that preservation of

species "in their natural habitat" is the best method of ensuring their survival. Some fear this as the beginning of total environmental control.

The report's authors believe that these fears are unjustified. They point out that most of the endangered plants have extremely limited ranges and are confined to bogs, marshes, river banks, mountain tops, canyon rims and similar places not likely to be suitable timber areas. Where rarities are associated with commoner species, however, they contend the endangered species should not be sacrificed merely for the sake of harvesting the trees.

STATUS OF NATIVE AMERICAN PLANTS<sup>1</sup>

| Status                    | Number in U.S.<br>(inc. Alaska) | Percent of total | Number in Hawaii | Percent of total |
|---------------------------|---------------------------------|------------------|------------------|------------------|
| Total native species..... | 20,000                          | 100.0            | 2,200            | 100.0            |
| Endangered.....           | 761                             | 3.8              | 639              | 29.0             |
| Threatened.....           | 1238                            | 6.1              | 194              | 8.8              |
| Extinct.....              | 100                             | 0.5              | 255              | 11.6             |
| Total.....                | 2,099                           | 10.4             | 1,088            | 48.9             |

Definitions: Endangered—Those species of plants in danger of extinction throughout all or a significant portion of their ranges. . . . Plant taxa from very limited areas . . . or from restricted natural habitats, usually are considered endangered; Threatened—Those species of plants that are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges. This includes species categorized as rare, very rare, or depleted; and Extinct—Those species of plants no longer known to exist after repeated search of the type localities or other known or likely places. Some species so classed may be extinct in the wild but preserved by cultivation in gardens, such as the "lost *Franklinia*."

<sup>1</sup> As compiled by botanists of the Smithsonian Institution in their report to Congress.

That brings up the question of where the line should be drawn. As stated earlier, why go to so much effort to save a few rare and obscure species of no known value to man?

The reply by Smithsonian's experts is that the question answers itself. We must preserve every possible existing plant species, they contend, precisely for the reason that we do not yet know whether it may some day prove of immense value to man. For example, the report questions, what if the cinchona tree had vanished before the value of its bark (quinine) in combating malaria was known? And suppose the mould, *Penicillium notatum*, had become extinct before Sir Alexander Fleming discovered penicillin?

Jenkins and Ayensu pointed out in a recent article in *Smithsonian Magazine* that when any plant becomes extinct, its unique gene pool is lost forever. Lost also is any possibility of future usefulness to man. They estimate that 50,000 new chemical compounds can be discovered in existing plants, including some with important medical uses, safe insecticides, and chemical structures which provide the keys to synthetic production of compounds.

In the increasing world food crisis, they say, it may be vital to our survival to develop new types and varieties of plants which can adjust to difficult terrain and changing climates.

"Many of our rare and threatened species are especially valuable since they are able to grow in difficult habitats, such as cedar and shale barrens, islands, sand dunes, ocean and estuary shorelines, rock faces, mountain tops, bogs and unstable areas. . . .

"We would be foolish to destroy plants which might later prove of vital importance."

Perhaps those who believe that golf courses—or cash in the pocket—are more important than possible future discoveries will not be convinced by the scientists' views.

The report reserves some of its harshest language for acts of modern man which, in its words, show "an almost total lack of concern for the plant and animal species that share the planet with him.

"As a result, many species of plants recently have become extinct, and a large number are highly endangered unless they are provided quickly with special protection, or the removal of threats."

Among the directly destructive activities which its says pose the greatest threat to plants are the building of dams and power plants, strip mining, shale oil recovery, increased irrigation and agriculture, development of cities, roads and factories, dumps and pollution, over-grazing, flooding, fires, the



lowering of water tables through wells and drainage, and certain timber practices.

"Timber removal, particularly clear cutting, with the resultant erosion, is a major and direct method of destruction," the report says.

This will raise hackles among some timber producers who deny emphatically that clear cutting is a cause of erosion, or a "destructive" method of timber harvesting.

Introduction of Old World plants, accidentally or on purpose, is cited as another source of danger to rare species. About 1,800 introduced species are found in the U.S., the report says. Some of these have become noxious weed or aggressive species, spreading rapidly and choking off older and more delicate plant types. Two examples familiar to everyone are the common dandelion, an import from Europe, and honeysuckle, brought in from Asia.

Even more strongly condemned are commercial exploitation and private collecting of rare plants, both of which the report would prohibit. "Despite the high frequency of unsuccessful transplants . . . collectors of rarities persist in causing serious damage to critical species," it says.

Perhaps the prime example of commercial exploitation is among the cacti of the southwest. The Smithsonian study lists 48 species of cacti as endangered or threatened—a third of all the species found in this country. Yet all are sought in the wild by dealers for sale to the public—and the rarer they are, the higher price they bring. Dealers who know where to find certain scarce types keep the location a closely guarded trade secret. This "fad for rarity" should be discouraged, the report says, and commercial dealers required to grow rare plants from seed, not seek them in the wild.

Pitcher plants, Venus fly-traps and orchideae also are under pressure from dealers and collectors. *Darlingtonia*, a pitcher plant found only in California and Oregon, has been collected so heavily it is on the endangered list. Also eagerly sought are a number of succulent plants, many types of lilies, iris, primula, columbine and mallows.

Urban sprawl is rapidly wiping out some species. When an investigator recently went looking for three rare members of the pawpaw family which he had formerly observed in an area of southern Florida, he found small lots, bungalows, house trailers and newly dug ditching instead. Bulldozers were busy in the nearly scrub land.

To the argument that housing expansion can hardly be halted to save three species of pawpaw, the Smithsonian experts reply that much could be done if plants were included, as fauna now are, in impact studies and land use planning. In that case, the Florida development might have been located elsewhere.

Major areas of concentration for the threatened and endangered species are in California, Florida, Texas and Hawaii, partly because of rapid population growth in those states and partly because that is where the rarities occur. But nearly every state has problem plants (Maryland, for instance, has nine) and a separate table lists the endangered species by states so that interested groups can concentrate on their own areas.

The United States, incidentally, is not alone in tackling the question of imperiled plant species. It is a worldwide problem, and one which the International Union for Conservation of Nature and Natural Resources (IUCN) has been grappling for years. Some countries have strong enforcement and educational programs. Switzerland, for instance, protects Alpine flowers both with beautiful posters to teach the public what they look like and stiff fines for disturbing them.

What happens next to the Smithsonian's recommendations? Because of their unusual legal status, the answer at this writing is that nobody knows.

In theory, Congress already has approved the goals of the report, although not necessarily the steps to implement them which the authors have proposed.

It did this more than a year ago by the simple process of inserting the words "and plants" into the Endangered Species Act of 1973, which dealt almost entirely with protection of fish and wildlife.

At the same time, it requested the Secretary of the Smithsonian Institution to review endangered and threatened species of plants and report to it within a year, with recommendations for new legislation or amendments of existing legislation.

The report, which Smithsonian Secretary S. Dillon Ripley submitted to Congress in mid-January 1975, was far more than merely a review. As noted, it contained the master lists of endangered, threatened and recently extinct plants, along with urgent requests for action by federal agencies to protect

them under present law. But the Smithsonian Institution, of course, has no power to force the agencies to do so.

Ripley sent the report to House Speaker Carl Albert and Vice President Rockefeller in his role as president of the Senate. Albert bounced his copy along to the House Merchant Marine and Fisheries Committee, where it landed on the desk of a subcommittee headed by Rep. Leonor Sullivan (D.-Mo.) which has charge, among other things, of matters dealing with "the Environment."

The subcommittee plans to hold hearings sometime this spring. It wants to know if changes are needed in the 1973 law despite the report's disclaimer that "no new federal legislation is required at this time." Ripley and also eminent botanists who helped prepare the report probably will be called.

Meanwhile, the report is in the lap of Interior Secretary Rogers Morton. If he decided to give it official status by publishing the Smithsonian lists, or a revised version of them, in the *Federal Register*, then most of the recommendations can be implemented. If he decides to drag his feet, as some observers think is likely, then little or nothing can be done.

In any case, the Smithsonian's scientists believe that they have done the job required of them. The monumental lists, imperfect though they may be, are now in being. The mapping, also important, is expected to be completed by July. Separate lists for Puerto Rico, Guam, the Virgin Islands, and the Pacific Island Trust Territories, and for lower plants such as fungi and liverworts, are in prospect.

Henceforth no bureaucrat will have an excuse for saying that a plant species vanished from the face of the Earth because he didn't know it existed on land under his control.

Where the program goes from here is up to the politicians—and the public—now.

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(Submitted by Dr. Bruce MacBride)

#### BOTANOCRATS & THE FADING FLORA

(By Janet Hopson Weinberg)

Ten percent of U.S. plants are in danger of extinction. Some may be saved—unless they choke in red tape first.

The middle-aged botanist and his wife launched their canoe on the east fork of the Kickapoo River just south of Rockton, Wis. They had come up from Cedar Falls for the weekend, to search the sandstone bluffs along the river for *Sullivantia* plants—rare, slender herbs with tiny white flowers.

A botanist from the Interior Department's Office of Endangered Species had called a week before, asking for information: Was *Sullivantia* an endangered species? Would they have time to go up to Wisconsin and study it in its habitat?

They paddled 10 miles south through the shaded rock walls to LaFarge, site of a proposed dam project. If built, this dam would inundate the walls and kill, the botanist calculated that weekend, more than half of the country's remaining *Sullivantia* plants.

Yes, he later wrote the Government botanist, in his opinion *Sullivantia* is an endangered species—more so because of the pending flood control dam. But wouldn't such a project, he asked, if it caused the loss of an endangered plant, be illegal under the Endangered Species Act?

Yes, the Government botanist sighed, reading the letter, it would be illegal. But what, he wondered, can really be done about the collision between a dam and a wildflower?

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"I can see how it would be frustrating to the people back home," Keith Schreiner says, staring off into the gray corner above the bookcase in his Washington office. "They look at us and say, 'Humph, those big fat bureaucrats in Washington don't do anything but sit on their duffs. All they have to do with endangered species is put them on the list! Why don't they do it? What's holding them back?'"

He shifts his weight and the spring base of his chair creaks loudly. "Doing it legally. That's what holds you back. For every species, my botanists have to write all new material. Contact the experts of the world, find out what is

known about everything. Then come out with the best current scientific and commercial information available—that's what the law requires.

"We have to put all that into a status report and an environmental assessment and a proposed rulemaking and a final rulemaking. It comes out," he says, spreading his pudgy thumb and forefinger two inches, "like, that thick for every species."

From his huge office behind its stenciled glass door—one of the thousands that open onto the long, dim corridors of the Interior Department building—Schreiner oversees the U.S. Fish and Wildlife Service's endangered species program. One of his newest charges under the 1973 Endangered Species Act is to gear up the Federal machinery to protect endangered and threatened plants—an alarming 10 percent of all U.S. plants.

Protecting delicate, pink wildflowers from extinction in Nebraska or Florida with reams of paper in Washington is a very slow process. And since the 1973 act was passed, forward movement remains nearly imperceptible. A plant or animal species in order to receive the quite extensive protection afforded by the act, must first be named officially to the Interior Department's endangered species list. But despite a year and a half of bureaucratic effort, no plants have yet been listed.

"Have I ever told you my little story," Schreiner asks in an Iowa farm drawl, "about the endangered species universe? It gives you a little idea about what we're dealing with. The endangered species universe has about 2 million species of plants and animals, give or take 100,000. There are probably four or five times that many subspecies and God knows how many populations. Now there is good evidence to suggest that as many as 10 percent of all animal and plants on earth are endangered right now.

"The simple facts are these," he says. "It takes us a minimum of 36 professional man days to list a single plant or animal species and I've only got six full time professionals who work at this—among other things—for the whole lot of them. It will take us, at this rate, the next 6,000 years just to list all the endangered plants and animals that need protection by the Endangered Species Act, not to mention developing programs for them. So I just can't think in terms of time. We'll never get the job done, so it becomes important that we prioritize our list and do the most important ones first. We're starting to do this now," Schreiner says, "with the Smithsonian list."

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Robert DeFilipps' office is buried in the dark labyrinth of the academic wing of the Smithsonian Institutions National Museum of Natural History. Linnaeus, amidst the watercolor of a mango plant and a set of nature posters, gazes down onto the cluttered desk and the cramped office. Behind the desk, DeFilipps takes a report from a file cabinet drawer. "Congress directed the Smithsonian to prepare the list of endangered and threatened plants and to submit it within a year," he says carefully. "We did that this January." He directed much of the listing project, which is officially headed by Edward Ayensu, chairman of the Smithsonian's botany department. DeFilipps is a large man, balding, and with a perpetual look of concern. He shares his small office with two assistants in the Endangered Flora Project.

The list, he explains, represents the first such national compilation. It names 761 endangered and 1,283 threatened plant species from the continental United States and Alaska. "Endangered," DeFilipps reads from the report between shallow, nervous drags on a cigarette, "means in danger of extinction throughout all or a significant portion of their range. Threatened means likely to become endangered in the future. Hawaii is a special case," he says, his expression deepening. "We've listed almost one thousand Hawaiian plants as endangered or threatened. That's almost 50 percent of the 2,000 or so species there."

The list contains vascular plants (flowering plants, conifers and ferns) from dozens of plant groups, including members of the aster, forget-me-not, cactus, sedum, heath, spurge, lily, mallow, orchid, buckwheat, rose, saxifrage and snapdragon families. Rare and endangered species are usually found, the report states, in narrow niches, such as mountain tops, ravines, river banks, acid bogs or rock cliffs.

"My favorite example," DeFilipps says, "is French's shooting star. It's adapted to growing in these cave-like depressions beneath overhanging sandstone ledges in Arkansas and Kentucky and southern Illinois. It's on the list because of its narrow range and restricted habitat. But it would be rare,

regardless of human activity." Giant sequoias, Florida yews and Georgia plumes are other examples of "endemics," rare plants limited to such small ranges that protection is considered necessary, even without people pressure.

But people pressure is causing the demise of many other plants. Habitat destruction is clearly the greatest threat to plants. Man's technology and growing population have lead him, increasingly, to gobble up "empty" land: strip mining, oil shale recovery, construction of power plants and houses and highways and dams all seem to lead, unfortunately, to permanent losses in the plant gene pool. Agricultural practices, too, the Smithsonian report states, destroy natural plant habitats: timber removal, especially clear cutting, overgrazing by cattle, introduction of foreign plants that compete too successfully with indigenous species, the use of some fertilizers and pesticides and fires.

"Collecting of rare plants is another big problem," DeFilipps says. He has his back to a window that overlooks the Mall and the Washington Monument, which, at that moment, looks like the giant sterile spike of a mechanical plaitain, sessile gray flowers long since blown away. "Cacti, maybe 30 percent of them, are endangered now largely because of collectors and the fad for rarities among plant enthusiasts." The exact locations of threatened and endangered species can't even be revealed in publications, he says, because "that status immediately increases the plant's worth, and people will fight with each other to dig up the last one."

Several cacti, some types of lilies, irises and orchids and exotic-looking species like pitcher plants and Venus fly traps often are collected and sold after being uprooted from remote and delicate habitats. They seldom survive for long in cultivation. "But, except for some state and local laws, digging up these plants is still quite legal," DeFilipps frowns, "since none of the plants have yet been named to the Endangered Species list." The act itself, in fact, does not specifically prohibit the taking of endangered plants as it does the taking of endangered animals, he says, although it does regulate interstate commerce of listed plants. Other Federal laws prohibit collecting in national parks.

Consumers, DeFilipps says, should try to find out, before buying a rare plant, if it is considered endangered and if it was taken from its natural habitat or was propagated commercially. The Smithsonian lists 77 commercially exploited plants.

Now that the list has been submitted to the Government, DeFilipps and his assistants have begun to map the ranges of all the listed species. This, he says, will show aggregations of endangered species that can be protected in plant refuges. "There is, for example, a bank of the Apalachicola River in the Florida panhandle, with 14 endangered plant species all living near each other." Other centers of plant endemism occur in the southern Appalachians, Texas, California, Nevada, Arizona, Utah and the Pacific Northwest.

Mapping the plant habitats is a huge project and will take the Smithsonian Endangered Flora Project staff most of the next year, DeFilipps says. In light of the efforts being made, he is not thoroughly pessimistic about the prospects for the thousands of endangered and threatened plants, and as part of the Smithsonian, takes an "officially impartial view." But personally, he says, he thinks "we can at least save some of them, eventually."

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"We're already in the Federal Register, as of July 1, with the intent to accept the whole Smithsonian list as a petition," Schreiner says, clearly pleased with this bureaucratic move. Under the Endangered Species Act, he explains, a citizen or group can petition the Interior Department to consider whether a certain species is endangered. Private groups have bombarded the two Interior Department botanists with letters, swamping them before they could begin to arrange the important Smithsonian list into priorities. This move, accepting the whole list as a petition, lets them consider the thousands of Smithsonian plants *along with* those suggested by private groups so that the most desperate cases can be processed first.

"And then once we get an endangered plant on the list, it gets the full protection of Section 7 of the Endangered Species Act." This section, Schreiner says, tells all the other agencies of the Federal Government, in effect, "Thou shalt do nothing to harm endangered animal or plant species or habitats or you are in violation of the act." The agencies must ensure, he says, that none of the actions they authorize, fund or carry out will harm listed animals or plants or destroy their habitats. Could this really stop a Corps of Engineers

dam project or a Department of Transportation highway exchange? "You bet," Schreiner says, "it could stop literally trillions of 'em!"

"If the Department of Agriculture were to spray herbicide all over a large forest that contained an endangered plant, that action would be prohibited. Or clear cutting a block of timber, if it destroyed an endangered species' habitat in the process, would be a violation." What about habitat destruction by a private company on private lands? "If a project were strictly private, with no Federal funds, then it would not be in violation. But in the vast majority of cases," Schreiner says, "such a project is Government subsidized in one way or another and would be regulated by Section 7."

"All we have to do," he muses, "is get the plants on the list." He reaches for a pack of cigarettes and pushes over a brick sitting on his desk. The brick has an inscription on it, written by a colleague—something about Jack Anderson. "Yep," Schreiner draws, "h e kinda laid one on me pretty good." He has, it turns out, the dubious distinction of having had a Jack Anderson column devoted entirely to his alleged inaction while administering the Endangered Species program. "I felt it was a bit unjust," he grins, "but then I could be considered to have a biased viewpoint."

Critics charge that Schreiner has yielded to pressure from the gun lobby, industry and other Government agencies, and has not allowed the listing of a single endangered plant or animal species since the act was passed in 1973 (kangaroos and grizzlies have been listed as threatened).

Schreiner has an answer to this. "You know, I wouldn't like to lose a species, but I'd hate like hell to lose the whole Endangered Species Act. And I'm worried sick about that right now." If Section 7 of the act is used by environmental groups to stop major projects such as flood control dams, because they would wipe out an endangered species or destroy its habitat, those agencies are going to pressure Congress to weaken Section 7. (Several government officials expressed concern that oversight hearings to be held this Fall by the House Merchant Marine and Fisheries subcommittee on fisheries and wildlife will be a forum for such attacks on the Endangered Species Act.) "Stopping a multimillion dollar dam because of a little mushroom just doesn't make sense to the Corps of Engineers," he says.

"Sure, we've been going slow, but I'm trying to avoid the hard confrontation until we've got some firm foundations built in law and precedent." (Interior just published some important rules and regulations in the Federal Register, he says, and there are several court cases pending that will set precedents in the implementation of Section 7 and its power to stop Federal projects.) "I'd rather avoid confrontation until I'm firmly entrenched and it's harder to blow me out of the water," Schreiner says. "Then we'll law it on 'em."

Environmentalists such as Lewis Regenstein of the Fund for Animals don't really object to Schreiner's protection of the potentially powerful act, but emphasize that not all endangered species are a threat to public works projects. "You take something like the Cedros Island mule deer," Regenstein says, "or the Caribbean monk seal. There are increasingly few of these left, and they are not a threat to the gun lobby or to a public works project. And yet the Interior Department has stalled on listing them until they are just about extinct."

A consortium of national environmental groups called Monitor, Inc., has just written the Interior Department to protest its inactivity on another set of regulations, the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Two years ago, the United States hosted 80 other nations in a convention to protect endangered wildlife from commercial international trade, and has since ratified the convention, which protects thousands of plants and animals. Two years after the convention, however, the Interior Department has yet to set up procedures for enforcing the import and export regulations and has, according to Monitor president Milton Kaufman, instructed the Fish and Wildlife Service not to enforce the convention at ports of entry.

Both the endangered species act and the international convention are potentially strong measures, Regenstein says, but "they don't mean a damn thing if the rules aren't set up or the plants and animals aren't listed in the first place."

When confronted with such criticism, Schreiner's jaw takes on a stubborn set. "No matter how long it takes, I insist on biological and legal accuracy. We haven't been ready to list some of the animals in the past, and the groundwork hadn't been set. But it's just about ready now. Pretty near ready.

Besides," he says, "my botanists are working on listing the first four plant species right now."

One of them is *Sullivantia renifolia*, from the Kickapoo River rock walls.

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"The help we have been getting is just amazing," Bruce MacBryde says. He is leaning back in his office chair, hands locked behind his head. "Like the botanist from Iowa and his wife canoeing down the Kickapoo river. Without that kind of concern, our list would take, well, maybe forever."

MacBryde is one of two botanists in the Government's Endangered Species Office. He and his colleague Gail Baker share a small office that looks up 16th Street in Washington toward the Russian Embassy. MacBryde is 34, intense and a bit harried. From an 11th-story office crammed with metal file cabinets, maps and botanical monographs, he and Baker must decide, sight unseen, whether 24,000 plants are endangered or threatened, and whether they should be protected by the full project-stopping force of the Endangered Species Act.

"We just don't have the time to go check out these plants ourselves, in most cases. We also don't have a lot of contract money to pay other people. But we have to know whether a species is endangered throughout all or a significant portion of its range—that's what the law requires in order to call it endangered—how many plants there are and data on the critical habitats. So we're telling botanists around the country, 'You go out and do the hunting in your areas.' We have to rely on your free help and commitment."

"In a region where no one cared enough to volunteer his time," Baker says, "the plants could just become extinct. That's why we have to put pressure on the botanical community."

The phone rings for the fifth time in 40 minutes. MacBryde operates the botanical intelligence-gathering web from that phone. "This one's for you, Gail," he says, punching a phone button. He has only been with the Interior Department since May. Before that there were no botanists at all. Baker has only worked with him for about a month. Both straight from academia, they are still adjusting to bureaucratic procedures and are watching carefully to see how severely their botanical judgments will be modified by politics.

"There's no question about it," he says, "politics does play a role. I consider myself first and foremost a botanist, and we're all on the side of the organism in the Endangered Species Office. But we have to consider the impact of protection. You take the LaFarge dam project, for example. We not only have to find out if *Sullivantia* and monkshood and the others—Bird's-eye primrose and Forbes' saxifrage—would be destroyed by the dam impoundment area. We have to find out what the cost would be in terms of jobs. Economics. This all goes into our impact assessment report. But," he says, suddenly uncomfortable with the political sound of this botany, "we just give the data on the impact. Someone else must balance these factors—the dams and the plants."

"The Endangered Species Act is potentially so powerful. We're already getting vibrations from state and federal agencies. 'Do you know what you could do with this law? With this list of plants?' So we have to be careful. Absolutely correct botanically."

"But then," he says slowly, "there can be so much pressure on building a beautiful, airtight case, that the plant can die in the process. I just don't know."

[Whereupon at 12:30 p.m., the subcommittee adjourned, subject to the call of the Chair.]

